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PLANNING OUR NEW HOMES



A REPORT BY
THE SCOTTISH HOUSING ADVISORY COMMITTEE

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PLANNING OUR NEW
HOMES



“THE policy of waging war until victory would be incomplete, and indeed spoiled, if it were not accompanied by a policy of food, work and homes in the period following the victory for the men and women who fought and won.”

The Prime Minister: 9th November 1943.



PLANNING OUR NEW HOMES

REPORT BY THE SCOTTISH HOUSING ADVISORY COMMITTEE ON
THE DESIGN, PLANNING AND FURNISHING OF NEW HOUSES

Publication prepared for the Committee by the Department of Health for Scotland

EDINBURGH: HIS MAJESTY'S STATIONERY OFFICE. 1944

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TERMS OF REFERENCE

SUB-COMMITTEE ON HOUSING DESIGN:

“To make recommendations as to the design, interior planning, layout, and standard of construction of new houses in Scotland.”

SUB-COMMITTEE ON FURNITURE:

“To consider how best local authorities can exercise their powers under the Housing (Scotland) Acts to provide furnishings, fittings, and conveniences in houses provided by them, and to advise on what additional powers, if any, should be available to local authorities for this purpose.”

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PREFACE

To the RIGHT HONOURABLE THOMAS JOHNSTON, M.P., *Secretary of State for Scotland.*

SIR,

1. We were appointed by you on 25th August 1942 as the reconstituted Scottish Housing Advisory Committee to undertake a number of enquiries designed to review the problems likely to arise in connection with the Scottish housing programme as a whole in the post-war period, and at the first meeting of the reconstituted Committee, held on 2nd October 1942, you informed us that you wished us to furnish reports on the following terms of reference:

- (a) "To make recommendations as to the design, interior planning, layout, and standard of construction of new houses in Scotland."
- (b) "To consider how best local authorities can exercise their powers under the Housing (Scotland) Acts to provide furnishings, fittings, and conveniences in houses provided by them, and to advise on what additional powers, if any, should be available to local authorities for this purpose."

The Committee's Task

3. As we have already mentioned, both the subjects remitted to us are closely related. In the first place, the supply of movable furniture, fittings and equipment by local authorities to houses provided by them depends upon the extent to which standard fittings and built-in furniture have been provided with the house and the latter provision in turn affects the design and internal planning of the house. In the second place, many of the suggestions made to one of the Sub-Committees were of interest to, and had a bearing upon the investigations of, the other. We therefore decided in the initial stages of our investigations to classify our enquiries under the following headings:

- (i) Types of Dwelling;
- (ii) Standards of Living Space;
- (iii) Internal Planning and Arrangement of Rooms;

You also intimated that you had appointed two sub-committees of our Committee entitled the Housing Design and Furniture Sub-Committees to undertake the enquiries involved in these remits. It was brought specially to our notice in connection with the former enquiry by the Housing Design Sub-Committee that "the enquiries were not confined to houses to be erected by local authorities but should also cover houses provided by housing associations and private enterprise generally, and the recommendations in so far as they might be accepted for the purposes of the Government's post-war housing policy would, it was hoped, be widely adopted by local authorities and would set up a standard at which private enterprise might aim."

2. The reports of these sub-committees who have held 19 and 7 meetings respectively have been submitted to the Main Committee and, in view of the close relationship between the subjects of the respective enquiries, we have decided to incorporate these reports in a single combined report which we have now the honour to submit.

- (iv) Services, Fittings and Equipment;
- (v) Standards of Construction;
- (vi) Design, Layout and Amenities;

and arrangements were made whereby the Furniture Sub-Committee would consider under sub-head (iv) the standard equipment, fittings, built-in fitments, etc., to be provided "with the house" so that the Housing Design Sub-Committee in turn could take account of these recommendations in making their recommendations under the remaining sub-heads. Part I of this Report is devoted to a consideration of the sub-heads of the enquiry just outlined and includes a supplementary chapter on special factors affecting the immediate post-war situation. Part II of the Report gives our conclusions on the question of the extent to which local authorities can best use their powers under the Housing Acts to provide "non-standard" equipment, that is movable

furniture and furnishings, in houses provided by them. This part of the report deals also with some aspects of house management so far as relevant to the enquiries and with the specific question raised in the remit to the Furniture Sub-Committee of the additional powers, if any, which should be made available to local authorities to facilitate the supply of furniture, etc. to houses provided by them.

4. It was clear from the outset that the subjects which we had been asked to investigate raised many questions in which the general public have a keen and intimate interest. We therefore took special steps to ensure that the evidence which we required was drawn from as wide a range as possible of interested organisations and individuals. The following methods of obtaining this evidence were adopted:

(a) We provided to the Associations of Local Authorities and to the Corporations of the four cities in Scotland, as well as to certain professional, technical, and women's organisations, a list of the headings under which we had classified our enquiries and asked them to submit evidence under each of these headings. A list of these organisations and of those referred to in (b) below is contained in Appendix 2.

(b) Arrangements were also made through the Press to draw the attention of other interested bodies and of the general public to our investigations and to invite them to submit their views and suggestions to us. The splendid response to this invitation deserves special mention; very many letters were received from the public, containing numerous valuable suggestions, and we should like to acknowledge the help given to us in this way.

(c) We felt that men and women serving in His Majesty's Forces and men and women drafted to war work in the factories would be specially interested in the design and equipment of houses to be built after the war and that they should have an opportunity of putting forward their suggestions to us. We therefore drew up a questionnaire which was widely circulated to members of the Armed Forces, including the Women's Services, in Scotland, and also to Scottish units of the Services serving in England and Wales. We should like to express our appreciation of the help given to us in the circulation of this ques-

tionnaire by the Chief Education Officer of the Scottish Command and by the personnel of the Army Educational Corps. The same questionnaire was also circulated to a number of factories in Scotland, principally those engaged on war work, and aroused keen interest and discussion. We are most grateful for the help given to us in this respect by members of the Scottish Group of the Institute of Labour Management who in their capacities as Welfare Officers in various industrial establishments in Scotland were able to distribute the questionnaire to workers in these establishments. The results obtained from the circulation of the questionnaire to men and women in the Services and in industry have been of great value to us in our enquiries. The questionnaire is reproduced in Appendix 3 to this Report which also includes an analysis of the replies received, prepared for us by the War-Time Social Survey whose assistance we should also like to acknowledge.

(d) On the question of the extent to which local authorities can best use their powers under the Housing Acts to provide furniture, fittings, etc. and of the further powers, if any, which should be made available for this purpose, we decided that a questionnaire should be issued to all local housing authorities in Scotland and to selected professional and women's organisations. This questionnaire is reproduced in Appendix 4 of the report which also contains a list of the authorities and organisations who completed the questionnaire.

5. In pursuance of our investigations we thought it important to see at first hand examples of the housing development carried out in England in the inter-war years by local authorities, public utility societies, and private enterprise. A small deputation, representative of both Sub-Committees, accordingly paid a visit to estates of houses and flats in London, Welwyn Garden City, Hatfield Rural District, Liverpool, Manchester (including Wythenshawe), Leeds, Birmingham, and Bournville, between 16th and 22nd March 1943. The deputation visited 29 estates of houses and flats and made a film record of what they had seen. We take this opportunity of expressing our appreciation of the assistance given to the deputation by the local authorities, public utility societies, private owners, and others

whose schemes were visited. We also decided to visit each of the four cities in Scotland to see for ourselves the housing development which had been carried out by the Corporations of these cities and to take oral evidence on the subjects of our enquiries. To these authorities also we should like to express our appreciation of the welcome given to us and the help which we received.

6. In view of the importance attaching to the medical aspects of our enquiries we submitted a draft of our report to the Secretary of State's Medical Advisory Committee who provided us with observations which were of the greatest value. We also had the advantage of meeting representatives of the Medical Advisory Committee and of discussing with them in more detail many questions of medical importance raised in our report.

7. Concurrently with our own enquiries a number of investigations are being carried out under the auspices of the Post-War Building Directorate of the Ministry of Works. These investigations are being made by Study Committees who are considering a wide range of questions relating to building in general such as plumbing, heating and ventilation, acoustics, architectural use of materials, plastics, solid fuel installations, etc. On all these committees, whose enquiries are of course being carried out on a United Kingdom basis, Scottish professional and technical interests are represented. We have kept in close touch with the work of these study committees and we have had regard to their provisional conclusions in the relevant paragraphs of our own report.

8. In addition, technical aspects of house construction with special reference to alternative methods of building are being dealt with by the Inter-Departmental Technical Committee on House Construction appointed in August 1942 jointly by the Secretary of State for Scotland,

the Minister of Health, and the Minister of Works, under the Chairmanship of Sir George Burt. Scotland is represented on this Committee by technical officers of the Department of Health for Scotland and by two members of our own Committee.

9. We should like in conclusion to refer briefly to the work of previous Committees in this field. We have benefited considerably from the following reports:

(a) Report of the Royal Commission on the Housing of the Industrial Population of Scotland, Rural and Urban, 1917.

(b) House Planning in Scotland—Report of the Women's House Planning Committee, 1918.

(c) The Tudor Walters Report, October 1918, on "Building Construction in connection with the provision of dwellings for the working classes in England, Wales, and Scotland and on methods of securing economy and dispatch in the provision of such dwellings."

(d) Report of the Scottish Architectural Advisory Committee on (1) the incorporation of architectural quality and amenity in the layout, planning, and external treatment of houses for the working classes; (2) the erection of high tenements—1935.

(e) Report on Working-class Housing on the Continent; Department of Health for Scotland—1935.

(f) Report by the Council for Art and Industry—the Working-class Home; its furnishing and equipment—1937.

(g) Report on Rural Housing in Scotland by the Scottish Housing Advisory Committee—1937.

(h) Report on Rehousing of Aged Persons by the Scottish Housing Advisory Committee—1938.

PART I: DESIGN AND CONSTRUCTION,
EQUIPMENT AND LAYOUT
OF NEW HOUSES

Chapter I: THE LEGACY OF THE PAST

THE monumental Report of the Royal Commission of 1917 has already given us a grim picture of the squalid character of the vast proportion of working-class houses provided in Scotland before the last Great War. It is unnecessary for us to elaborate the story told with such wealth of detail by the Royal Commission in their report and so vividly summarised in the following quotation from the report itself:

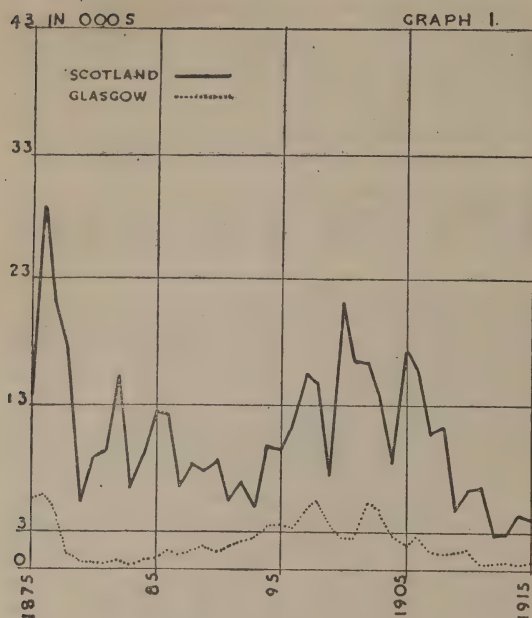
“ These are the broad results of our survey: unsatisfactory sites of houses and villages, insufficient supplies of water, unsatisfactory provision for drainage, grossly inadequate provision for the removal of refuse, widespread absence of decent sanitary conveniences, the persistence of the unspeakably filthy privy midden in many of the mining areas, badly constructed incurably damp labourers’ cottages on farms, whole townships unfit for human occupation in the crofting counties and islands, primitive and casual provision for many of the seasonal workers, gross overcrowding and huddling of the sexes together in the congested industrial villages and towns, occupation of the one-roomed house by large families, groups of lightless and unventilated houses in the older burghs, clotted masses of slums in the great cities. To these add the special problems symbolised by the farmed-out houses, the model-lodging-houses, congested backlands and ancient closes. To these, again, add the cottages of 100 years old in some of the rural villages, ramshackle brick survivals of the mining outbursts of seventy years ago in the mining fields, monotonous miners’ rows flung down without a vestige of town-plan or any effort to secure modern conditions of sanitation, ill-planned houses that must become slums in a few years, old houses converted without necessary sanitary appliances and proper adaptation into tenements for many families, thus intensifying existing evils, streets of new tenements in the towns developed with the minimum regard for amenity.” (Report of Royal Commission on Housing in Scotland, 1917; paragraph 2232.) [1]

The causes of these radical defects are, however, still of great interest to us now because the

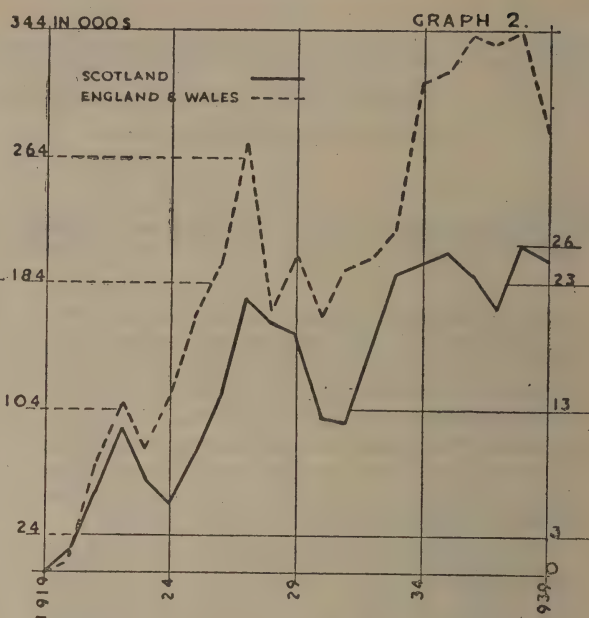
defects themselves, particularly the evils of gross overcrowding, have been only slightly mitigated despite the volume of house-building that has taken place since the last Great War. In fact, overcrowding conditions in Scotland at the present time are almost entirely a legacy of the types and sizes of houses which were provided in the nineteenth century to cope with the tremendous expansion of the population created by the expansion of industry in the course of the Industrial Revolution. The extent and volume of house production in boom periods in the latter half of the nineteenth century in Scotland is not perhaps as widely appreciated as it might be. For example, in Glasgow alone in 1876 no fewer than 5,746 houses were built, of which nearly 70 per cent. were of two apartments or less. This total output of houses has only twice been exceeded since 1919 despite the large-scale operations of the local authority under the Housing Acts in the inter-war years. Similar large-scale building of houses of one and two apartments occurred during the latter half of the nineteenth century in Scotland as a whole, and this activity reached its peak in 1900 when over 22,000 new houses were built in Scotland in the space of a single year, the majority of which again were of one and two apartments. The percentage of houses of these sizes erected in Glasgow, for example, in that year was 55 per cent. It is the houses built in this period which now give rise to the gross overcrowding, the elimination of which will be one of the primary objects of the housing programme immediately after the conclusion of the present war. [2]

Throughout the period to which we refer standards of equipment were gradually advancing even if the standard of accommodation provided in terms of number of apartments per house failed to show a corresponding improvement, but it still remains true that the vast majority of the houses built in the latter half of the nineteenth century, particularly in rural areas, were extremely deficient in water supply, in sanitary conveniences, and in domestic equipment generally. [3]

The decision in 1919 that the State should assume some direct measure of financial responsibility for the housing of the working



GRAPH 1. Houses built in Scotland and in Glasgow between 1875 and the outbreak of the last Great War. The graph shows the wide fluctuations in building activity throughout the whole period and the high output of new houses attained in peak years. The vast majority of these houses were of two rooms and less—a fact which explains the deplorable conditions of overcrowding in Scotland to-day.



GRAPH 2. Houses built in Scotland and in England and Wales between the two Great Wars. The graph shows that on a proportionate population basis the output of new houses in England and Wales was consistently higher than in Scotland. This was mainly due to the fact that 30 houses were built by private enterprise in England and Wales for each house so erected in Scotland.

classes resulted in a substantial improvement in the general level of housing conditions, with the result that out of about 1,300,000 houses occupied in Scotland at the present date over one-quarter, or about 350,000, have been provided since the last Great War. Of this number, 247,000 have been built by local authorities with the aid of subsidy under the various Housing Acts. In equipment and conveniences these houses constitute a great advance on most types of working-class houses built before the last Great War, and if in this report we have felt bound to criticise, sometimes in stringent terms, the design and layout of these houses, the accommodation provided and the types and amount of equipment installed, it must not be assumed that we are oblivious of the splendid achievement of local authorities in a field in which prior to 1919 they had had very little experience. Such criticisms as we have made and such recommendations as we have framed are based on our conviction, which we know is shared by all local authorities and all organisations and individuals who have given serious study to the problem of improving housing conditions in Scotland, that a critical appreciation of what has been done in the past is the firm foundation of future development and progress. [4

This report would be incomplete if we did not survey very briefly the scope and magnitude of the Scottish post-war housing problem in so far as it can be accurately estimated at the present time. The immediate post-war demand for new housing accommodation will be made up of: (a) houses required to replace unfit houses, (b) houses required to relieve overcrowding, and (c) houses required to house families which have no homes of their own—principally families created by marriages immediately before and during the war—and to meet other general needs.

The demand for housing accommodation in each of these categories at the present time is as follows :

Replacement of unfit houses

- | | |
|--|--------|
| (i) Houses found in 1938 to be so unfit as to require replacement | 66,538 |
| (ii) Houses estimated to be required to replace those which will have become unfit between December 1938 and December 1943 | 55,000 |

Relief of overcrowding

Houses estimated to be required in 1938 to end overcrowding (after taking appropriate account of the use of houses to be vacated by overcrowded families). . 200,000

General needs, etc.

- (i) Houses required to meet general needs and to replace those destroyed by enemy action 64,000
- (ii) Houses required as a result of marriages between December 1938 and December 1943 133,750
- TOTAL 519,288**

From this grand total there falls to be deducted the number of dwellings which, it is estimated, will have been completed between December 1938 and December 1943, amounting to 50,000.

[5]

In brief, the total number of houses estimated to be required in the three categories mentioned is about 470,000. This figure takes no account of houses which, although they have no sanitary conveniences or no internal water supply, for example, are not technically regarded as unfit. There are in Scotland about 405,000 houses which have no independent water-closets or have no sanitary conveniences of any kind and only a proportion of these are technically classified as unfit. In these circumstances it will be safe to assume that the present accumulated arrears of new houses required in Scotland

amount to at least 500,000. This total represents a "basic" need; it takes no account of additional demands for housing accommodation arising after December 1943 as a result of further marriages and further wastage of existing properties, nor does it take account of progressive improvements in housing standards which might make public opinion require the termination of the effective life of existing dwellings rather earlier than would otherwise be expected.[6

It is clearly of fundamental importance that the houses comprised in this huge total should be designed, planned and equipped in a manner worthy of the people of Scotland and worthy of the future generations of Scots folk who in their turn will make these houses their homes. Two and three generations ago, as we have seen, demands for housing accommodation were as acute as those which confront us to-day. These demands were met; houses were produced in quantities which, in the circumstances of the time, were phenomenal. The vast majority of these houses, however, solidly built as many of them were, satisfied only the most immediate need for shelter, and their deficiencies in quality, that is in standards of accommodation and equipment, are our inheritance and our problem to-day. The lesson is clear. While we are most deeply conscious of the great urgency of providing houses in maximum numbers in the immediate post-war years and suggest in our report special measures which may help to secure this result, yet this report would have failed of its purpose if it did not seek to formulate as a basis of long-term post-war housing policy standards of quality in design, accommodation, planning, and equipment which posterity will judge worthy of the ideals and aspirations of our time and not unworthy of its own. [7

Chapter II: THE TYPE OF HOUSE

The types required

WE begin by describing briefly the various types of dwelling which we intend to review and by defining the terms in which we propose to refer to these types in this report.

The types which we have considered are the following:

Cottage

A house of one, two, or (very rarely) three storeys with independent access or accesses from the ground floor, provided with individual garden ground and built in detached, semi-detached, or terraced blocks.

Flatted House A house contained in a building or block of two storeys which has all its apartments in one storey and with independent access (from the ground level) to each house in the building or block.

"Tenement" or Flat A house with all its apartments in one storey contained in a building or block of two, three, or more storeys in which access to houses on the upper storeys is by a common staircase (and balcony or lift). [8]

* We have received evidence in favour of one or other of these types to suit particular circumstances and needs, but the overwhelming balance of preference is in favour of the cottage, the main advantages of this type being privacy for the tenant, readily accessible playing space for the children, and the general advantages from the family point of view of a garden to which there is ease and privacy of access from the house. [9]

The flatted house seems to be accepted principally as a compromise between the cottage type of house and the "tenement" flat. It was, except in certain areas, almost unknown prior to 1890 and was uncommon down to the outbreak of the last Great War. Since 1919, however, 137,380 houses or 57 per-cent. of all houses built by local authorities in Scotland have been of the flatted type. In this period, this type of development has been consistently cheaper than the cottage type, but we cannot help deploring the disproportionately large concentrations of flatted houses which are familiar in almost all local authority housing schemes. These concentrations normally comprise blocks containing four flatted-houses each, and in many areas and in many schemes the blocks have a depressing uniformity of design which has been the subject of so much unfavourable comment. Our evidence draws attention also to the special problems associated with this type of house—the difficulty, for example, of securing adequate sound-proofing, the general absence of the same degree of privacy as is enjoyed in the cottage type of house, and the social intricacies sometimes involved in the use of a common access from the road or street to two or more houses of this type. [10]

The "tenement" flat has come to be regarded as one of the predominantly traditional types of house in Scotland. The various factors which gave rise to tenemental development in the cities and larger burghs of Scotland in the

nineteenth century were fully reviewed in 1917 in the Report of the Royal Commission on the Housing of the Industrial Population of Scotland,† and we need only say here that we regard the old-fashioned tenement as completely out of date by modern standards. Indeed, the higher standards now required by public opinion in this type of development prompt us to recommend that houses of this type should in future be described by central and local authorities as "flats" and not "tenements." This change in description has been accepted implicitly by public opinion so far as "luxury flats" are concerned; we see no reason why, in Scotland, flats planned to meet the modern requirements of the average family should still carry a title which to most of us has so many unattractive associations. Our evidence shows that only a minority of prospective tenants prefer flats. In some districts, however, flats will, without doubt, continue to be required, particularly in the redevelopment of the central areas of our cities and larger burghs; some of the factors which should be borne in mind when the erection of flats in such circumstances is contemplated, are examined in detail in paragraphs 22–23 and in Chapter VII of this report. [11]

Detailed features

COTTAGES Houses of this type may be considered from two aspects, according as they are (i) of one storey or two storeys; (ii) detached, semi-detached, or terraced. [12]

(i) The evidence submitted to us shows no marked expression of preference as between one-storey and two-storey cottages, except that the single-storey cottage is regarded as more appropriate to the special needs of aging persons. We have visited a number of excellent schemes of single-storey cottages for aging people, many of them beautifully designed and laid out, and we commend schemes of this kind. Moreover, tradition and custom in Scotland have established a strong preference for the single-storey cottage in rural areas and these factors cannot be lightly disregarded. The single-storey type is, of course, less economical of materials, land, and services than the two-storey type, but local authorities should be encouraged to erect the particular type which in this and in other respects is most appropriate to their local circumstances. [13]

(ii) In view of the emphasis in all our evidence on the importance of privacy for each individual home, there is much to be said in favour of the detached cottage dwelling.

* See dissentient memorandum by Mrs Jean Mann (page 95).

† Cmd. 8731, paragraphs 396–401; 1,612–14.

COTTAGES

In the Town



1. ABERDOUR



3. CARNOUSTIE



2. BANFF



4. DUNBAR

THE cottage is the type of house most widely preferred, both in town and country. Scotland's traditional domestic architecture is rich in examples of simple but well-designed and dignified cottages (1 and 2). In the late nineteenth century, however, this fine tradition became obscured by the gross accumulation of congested tenements in our larger towns and cities and between the wars by drab blocks of flatted houses which comprised 60 out of every 100 houses built by local authorities. But here and there one finds a revival of our traditional skill in designing modern cottages artistically which is perhaps best displayed in the longer terraced blocks which give dignity and scale to the architectural composition (3, 4 and 5).



5. WEST WEMYSS

COTTAGES

In the Country



DUMFRIESSHIRE



3. EAST LoTHIAN



FIFE



4. ANGUS

IN the country the single-storey cottage is the traditional type. Simplicity in design again characterises our best achievements in rural housing, both old (1 and 2) and new (3, 4 and 5). Variety of grouping single- and double-storey cottages in our rural towns and villages (2 and 4) is an art which we must recapture.



5. INVERNESS-SHIRE

FLATTED HOUSES



1. KILSYTH



2

THE flatted house has been almost the standard type of "council" house built in Scotland in the inter-war years. At its best (1 and 4)—with the blocks designed to give continuity of architectural scale and proportion—it can lend distinction to urban development. At its worst (2 and 3)—with the blocks designed in drab and unimaginative uniformity—it makes a poor contribution to Scottish domestic architecture.



3



4. RHU

FLATS



1. The old-fashioned tenement, EDINBURGH

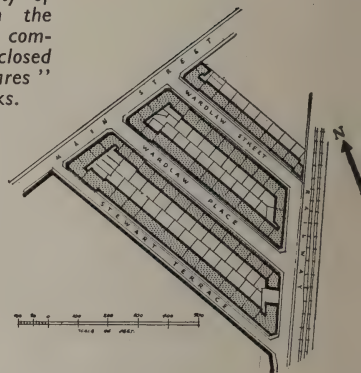


2. The modern tenement, ABERDEEN

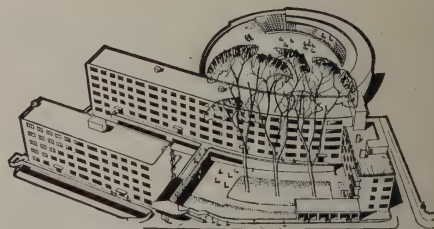


3. Modern flats, LONDON

Ground plan of tenements shown in 1, illustrating vividly the high density of the blocks on the site and the completely enclosed "hollow squares" behind the blocks.



THE "tenement" is widely regarded as Scotland's most characteristic type of dwelling. But the old-fashioned tenement (1), with its cramped dwellings on congested sites, is in its worst manifestations a growth of the nineteenth century except in a few towns where for special reasons the building of tenements was a strategic or physical necessity. The modern "tenement" (2) is an immeasurable improvement on its nineteenth-century prototype in design, planning and layout. Are we ready to take the further step to the development of modern flats (3) properly equipped with modern services, individual and communal, grouped on community principles and secluded from the noise, bustle and danger of the "Main Street"?



Perspective plan of modern flats shown in 3.

Note the nursery school and children's playground in background of plan and foreground of photograph, the community centre and shops in foreground of plan.

At the same time, from the point of view of economy in land and services, the proper disposition of layout, etc., we cannot contemplate that the majority of houses in future housing schemes will consist of detached dwellings. We therefore envisage that where cottages are built they will normally be of the semi-detached or terraced type. Indeed, we should like to see a return in future housing schemes to terraced development which is in the best traditions of Scottish domestic architecture. We are particularly impressed with the advantages from the architectural point of view of building houses of the cottage type in terraced blocks. These advantages are greatest where the blocks can be designed in such a way and in such proportions as to introduce variety of treatment to various layouts. This question is dealt with in more detail in Chapter VII of this report. [14]

FLATTED HOUSES Some of the more obvious disadvantages of the flatted house have already been mentioned. In view, however, of the extent to which this type has been developed in the inter-war years, it is unlikely that flatted houses as usually understood will cease to be built by housing authorities. In fact, there is limited emphasis in our evidence on one obvious advantage of the flatted house, namely, that it continues the Scottish tradition of having the whole dwelling on a single floor. The following considerations should however be borne in mind in future when the erection of flatted houses is proposed : [15]

(i) Adequate sound-proofing is absolutely essential; specific recommendations dealing with this point are made in Chapter VI (paragraph 240). [16]

(ii) Flatted houses also should be built in blocks longer than the customary blocks of four houses wherever practicable. We incorporate in this report model designs giving effect to this suggestion and proposing a solution of the major difficulties connected with the longer block, *i.e.* the provision of through access, etc. [17]

(iii) Flatted houses should not be built in rural areas unless exceptional circumstances make their construction essential. [18]

FLATS ("TENEMENTS") The question of the development of flats has already been referred to in general terms and other sections of the report deal with the internal planning, equipment and layout of flats. In this chapter we stress the following basic considerations : [19]

(i) Adequate sound-proofing is equally essential in this type of house. [20]

(ii) If lifts are not provided, we do not think that the number of storeys in blocks of flats should in any circumstances exceed three. [21]

* (iii) If lifts are provided, the number of storeys clearly depends on the particular conditions of the locality and we do not altogether exclude the possibility that in some districts, particularly in the large cities, blocks of flats of six to ten storeys may be appropriate, provided that the overall density of development is not excessive and ample provision is made for open space, recreational facilities, etc. [22]

(iv) Wherever the development of flats is contemplated, the question of site-layout assumes paramount importance, and in Chapter VII of this report we deal in detail with the problems involved. One important consideration, however, calls for special mention in this chapter. We are fully impressed with the undesirability of building blocks of multi-storey flats on the frontages of arterial and sub-arterial roads as has been the habit in this type of development in Scotland in the past. We commend for consideration the practice followed in England and elsewhere of treating estates of multi-storey flats on entirely different lines and of so disposing the blocks on the site that as far as practicable the development is grouped into a properly planned residential unit. [23]

Meeting special needs

The special needs which we have considered fall into three main groups—the needs of aging persons, the needs of single persons, and the special requirements of special types of communities. We have the following observations on each of these categories: [24]

AGING PERSONS There can be no doubt of the increased interest which public opinion is taking in the housing needs of older people. Two factors may be noted. Firstly, the increasing longevity of the people means that family houses tend to be occupied longer than hitherto by aging couples living alone; and, secondly, the extension of social benefits in the form of State pensions, superannuation schemes, etc., has given old people, both practically and psychologically, a keener sense of independence so that they are now less content to be maintained in the homes of their children. The other side of this argument is that young couples have a stronger desire to "live their own lives." On the whole, these tendencies are to be encouraged in the interests of the well-being of the young family. We are convinced from the evidence we have received and from our visits to estates,

* See note of reservations on this paragraph by Mrs Jean Mann and Mr F. A. B. Preston (page 91).

both in Scotland and in England, where special provision has been made for older people, that most aging people want homes of their own, and that they prefer a small house of one or two rooms to a hostel with communal services however well organised and however well equipped. This does not mean that we discount altogether in all circumstances the advantages of hostel provision for aging people. Several local authorities in Scotland have in the special circumstances of their areas provided hostels with great advantage to the aging tenants for whom they were established. We consider, however, that in the framing of estimates of post-war housing needs in each local authority area special regard should be paid to the requirements of aging persons and that local authorities should include in their building programmes a proportion of small houses of the cottage type for them. The proportion will depend upon a variety of factors, such as the number of one- and two-apartment houses which could be made available by decrowding operations and which could be modernised and converted to make them suitable for aging persons. Account would also have to be taken of the number of houses which might be provided under the arrangements suggested in the following paragraph. [25]

In certain circumstances, particularly in the larger burghs and cities, we feel that it would be appropriate to provide small flats for aging persons either in independent blocks or included in blocks of flats containing houses catering for normal family needs. In the former case, the blocks should not exceed two storeys, and in the latter case, the flats specially provided for aging persons should be located either on the ground floor or on the first storey. [26]

In general, we agree with the conclusions reached in the Scottish Housing Advisory Committee's Report on the Rehousing of Aged Persons published in 1938. Wherever possible, small houses and flats built for aging persons should be provided as an integral part of housing estates. Aging people should not be segregated and secluded; in the words of the 1938 Report, they should enjoy the privacy of a separate environment afforded by providing them with homes of their own, "without at the same time being cut off from the main stream of community life." [27]

In conclusion, it may be added that many old people are closely attached by all their associations to their existing environment, an important factor which local authorities should bear in mind when they are carrying out redevelopment on a large scale which involves the

rehousing of aging persons. The best way to meet their needs in such circumstances might be the reconstruction and modernising of suitable existing properties in the same neighbourhood. We expect to deal at greater length with this aspect when we undertake enquiries into the question of the reconstruction or modernisation of existing properties which, we understand, the Secretary of State proposes to ask us to consider at a later date. [28]

*** SINGLE PERSONS** The special needs of single persons other than aging persons have so far received very little consideration from local housing authorities in Scotland. We have in mind the particular problem of providing up-to-date housing accommodation for single women who, in addition to their responsibilities of running a home, have to go out to work. We were very impressed with the small houses and flats built specially for single women by a number of local authorities in England under the Housing Acts and we think that local authorities in Scotland should consider the provision of this type of housing accommodation where necessary. Here, again, the need will have to be closely related to the existing conditions in each area, particularly the number of one- and two-apartment houses already available or likely to become available in the district, and the question of modernising these properties is also involved. Where small houses or flats are built for single women, it is obvious that they should be planned and equipped on "labour saving" principles; this question is examined in more detail in Chapter V (paragraphs 214-218). [29]

SPECIAL COMMUNITIES In general, it is not desirable as a matter of policy to provide special types of houses for special types of communities. The basic requirements of every home are substantially the same in every type of community and the special provision which may be necessary in certain districts involves matters of detail only, e.g. in rural areas additional accommodation for the storage of food is required and separate accommodation in out-buildings is necessary for tools, etc. Similarly, in fishing communities additional accommodation will be necessary for the storage and repair of nets and other gear (e.g. space in the roof of the house for nets; communal net-sheds and stores, etc.). In some areas, special provision for the drying and storing of workers' clothing and boots, and special washing facilities may be desirable. We deal with these questions in more detail in Chapter V. [30]

* See reservations on this paragraph by Mrs Jean Mann (page 96).

Chapter III:

SPACE FOR LIVING

Present standards

BEFORE determining the sizes of houses, the areas of rooms, etc., appropriate to different family needs and as a basis of design and internal planning, it is essential to lay down precise standards on the following matters:

- (a) the minimum amount of space per person;
- (b) the accommodation capacity of houses of different sizes in terms of persons per room.

The fundamental relationship between housing and the health of the people is widely recognised and the question of determining standards of living space is obviously one of the highest medical significance and importance. Public health and social legislation of the past eighty years contains a multiplicity of provisions dealing with the matters which we have just mentioned. As these provisions partly overlap and partly conflict, it may be useful if we briefly illustrate the various provisions before making our specific recommendations on the standards in question. [31]

Standards of Space

The majority of the provisions referred to do little more than prescribe overall cubic dimensions for the house as a whole and do not prescribe specific standards for individual apartments, not even for bedrooms. Examples showing the development of provisions of this kind are the following:

Glasgow Police Act, 1862

One-apartment house	.	700	cubic feet
Two- " "	.	1,200	" "
Three- " "	.	1,800	" "

Glasgow Police Act, 1865

One-apartment house	.	900	cubic feet
Two- " "	.	1,500	" "
Three- " "	.	2,000	" "

Glasgow Building Regulations Act, 1892

One-apartment house	.	1,000	cubic feet
Two- " "	.	1,600	" "
Three- " "	.	2,400	" "

[32]

The last mentioned standards are also laid down in the Edinburgh Improvement etc. Act, 1893, and in Section 66 of the Burgh Police Act, 1903, which also provides a minimum cubic air space for the house as a whole of 400 cubic feet per person, two children under ten years of age being reckoned as one person. The provisions of the Act of 1903 are still operative by adoption in Burghs and 101 of the 195 Burghs in Scotland have adopted the provisions in question. [33]

In county areas, where bye-laws under Section 70 of the Housing (Scotland) Act, 1935, have been made, different standards apply as follows:

One-apartment house	.	1,440	cubic feet
Two- " "	.	2,640	" "
Three- " "	.	3,520	" "
Four- " "	.	4,240	" "

Exclusive of scullery, lobbies, passages, larder, cupboards, etc.

Of the 33 County Councils in Scotland, 20 have made bye-laws giving effect either to these standards or to equivalent standards. [34]

The only provisions in the housing legislation of the inter-war years prescribing standards of living space by reference to areas are the following:

Housing, etc., Act, 1923

New houses built by local authorities or private enterprise with the aid of subsidy under the Act were required to comply with the following standards:

two-storeyed house—

minimum area = 620 square feet ;
maximum area = 950 square feet ;

one-storeyed house or flat—

minimum area = 550 square feet ;
maximum area = 880 square feet.

(The minimum areas specified in these provisions are still operative in relation to houses provided with the financial assistance of local authorities under Section 75 of the Housing (Scotland) Act, 1925.) [35]

Housing (Scotland) Act, 1935 (First Schedule)

(a) In computing the number of rooms in a house no regard shall be had to any room having a floor area of less than 50 square feet.

(b) The permitted number of persons for rooms of different sizes shall be computed by reference to the following table:

110 square feet or more . . . 2 persons.

90 square feet or more, but less than 110 square feet . . . 1½ "

70 square feet or more, but less than 90 square feet . . . 1 person.

50 square feet or more, but less than 70 square feet . . . ½ "

"person" = adult or two children under ten years of age ; infants under one year discounted. [36]

The implication of these provisions assuming a minimum ceiling height of 8 feet is (a) that a room with a cubic content of 400 cubic feet or less is not large enough for human occupation even by one person, and (b) that two adults require as a minimum a cubic air space of 880 cubic feet per room. [37]

It will be seen that all these provisions with the exception of the penal overcrowding provisions of the Act of 1935 do no more than lay down minimum standards for the dwelling as a whole. Exceptionally, a few local Acts prescribe standards for individual apartments. Examples are the Aberdeen Corporation Act of 1907, which prescribed that every new habitable room must have a cubic content of not less than 600 cubic feet, now subsequently amended by the Aberdeen Corporation Act of 1936 which provides that no habitable room shall have a floor area of less than 75 square feet; the Glasgow Streets Sewers and Buildings Consolidation Order Confirmation Act, 1937 which prescribes that no habitable apartment in any new house shall have a cubic air space of less than 800 cubic feet exclusive of lobbies, closets, presses, etc. [38]

Finally, certain other enactments not directly related to housing provide certain minimum standards of a similar type. Examples are the Army Regulations which provide for a minimum of 60 square feet per person for dormitory accommodation in Army barracks; bye-laws made under the Public Health Act of 1897 regulating the occupancy of tents, vans and sheds which provide for a minimum standard of 200 to 300 cubic feet per person in sheds and count two children under 10 years as one person. [39]

It will be obvious from this brief review that

existing legislation on this fundamental point requires substantial clarification and co-ordination. Two conclusions are clear: firstly, an overall standard for the house as a whole is of comparatively little value because it makes it difficult to ensure the application of scientific medical standards to individual apartments; secondly, standards of space for individual apartments are themselves unsatisfactory unless parallel standards are laid down determining the presumptive occupancy of each apartment. [40]

Persons per room

In general, it was not until 1935 that standards were laid down regulating the numbers of persons deemed to be capable of being accommodated in houses of different sizes in Scotland. These standards are contained in the First Schedule to the Housing (Scotland) Act, 1935, and are as follows:

One-apartment house . . .	2 persons
Two- " " . . .	3 "
Three- " " . . .	5 "
Four- " " . . .	7½ "
Five- " " . . .	10 "

and for each additional room in excess of 110 square feet—2 additional persons. As we have seen, for the purposes of the standard, "person" is defined as meaning any person of either sex over ten years of age. Children under ten years are counted as "half persons" and infants under one year are discounted altogether. [41]

It must be noted that this standard in the 1935 Act is a penal standard of overcrowding for application to existing dwellings: that is to say, it defines the limits beyond which existing houses cannot be occupied "after the appointed day" without a penal offence being committed. Unlike most of the other provisions we have described, it was not designed or intended to be applied as a standard for determining the sizes of new houses required. Indeed, the Government of the day made it clear that they did not claim that the standard laid down in the Act of 1935 "was an ideal one or that it defined the level up to which it was hoped that the housing conditions of Scotland would ultimately be raised." * [42]

For various reasons, however, the standard has been applied administratively by the Department of Health for the purpose of assessing the accommodation capacity of new houses built with Exchequer assistance by local authorities. Local authorities in Scotland, as a condition of receiving subsidy under the Housing Acts, are required to certify that the houses, as respects which subsidy is sought, are not occupied either

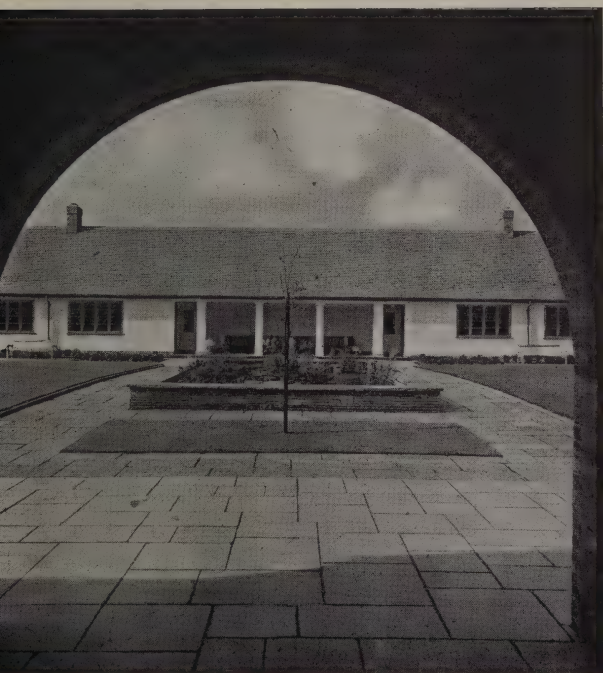
* Motion for the Second Reading of the Bill in the House of Lords, 10th July 1935. [Official Report: Vol. 98, 1934-35, Col. 239.]



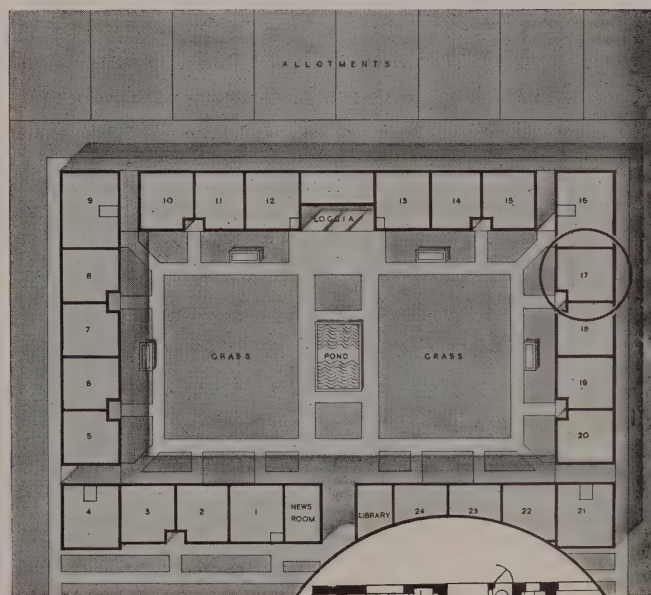
FOR AGING PERSONS



THIS excellent scheme of 24 single-storey cottages for aging people at Manchester shows what can be achieved in providing houses grouped in little communities in which older people can enjoy privacy without complete seclusion. Each cottage is well equipped as a home (see plan 3—circled) and the cottages are laid out round a quadrangle, provided with lawns, flower beds and a lily pond as a central feature (1).

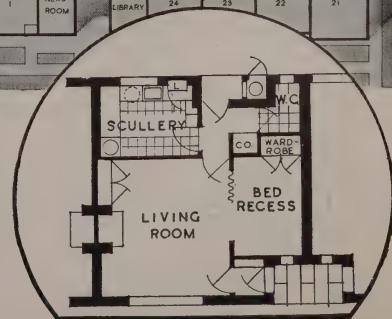


2



3

The sun loggia, seen in the view through the archway of the main entrance (2), the community rooms (shown on the layout plan) on either side of the entrance porch and the allotments behind the scheme, are other commendable features.



FOR SINGLE PERSONS

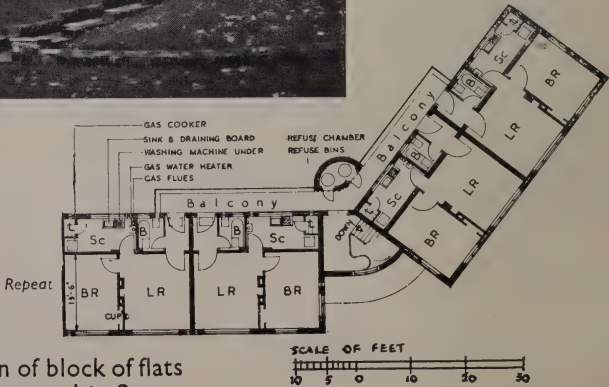


1. Flats for single women, MANCHESTER

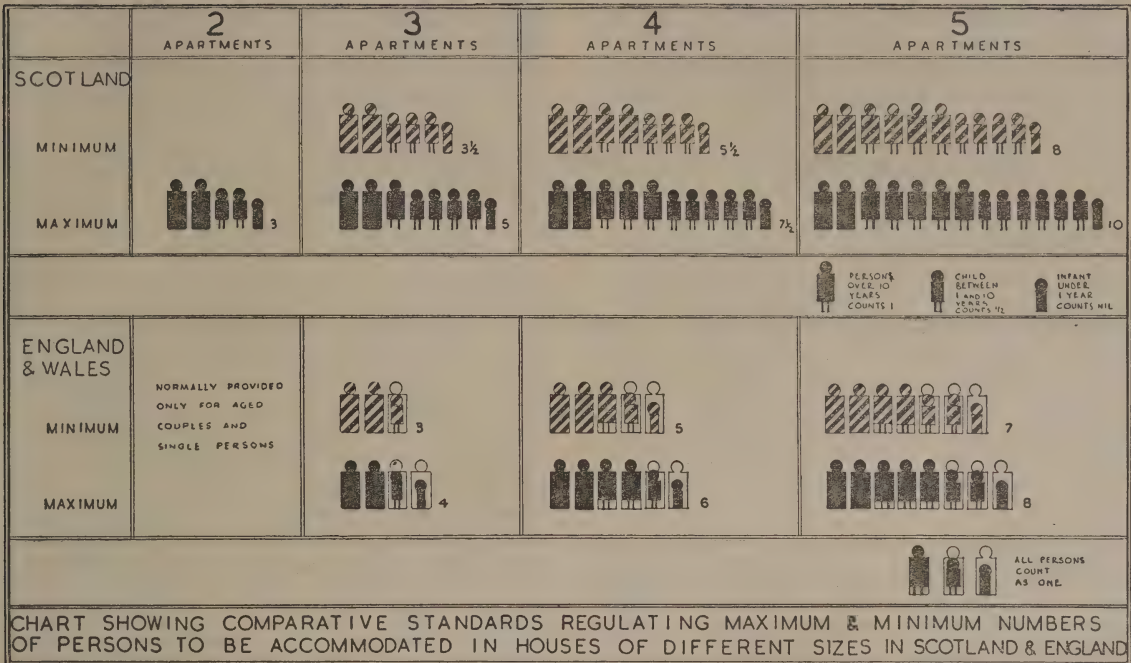


2. Flats for single women, LEEDS

MODERN flats for single women are increasing in popular appeal. Such flats should be planned on compact lines and should be equipped with modern labour-saving devices (see Plan 3), specially suited to women who have to go out to work as well as run their own homes.



3. Plan of block of flats illustrated in 2



above or below this standard. This requirement has come to be popularly known as the requirement of "minimum capacity" and its effect briefly is this. No house built by a local authority may, when first let, be let to a family for whom a smaller house would, according to the standard, be sufficient. To take a particular example, any four-apartment house built by a local authority must be initially let to a family which comprises not less than 5½ and not more than 7½ "persons," so that by this formula, a family of father and mother (2 adults), 2 children over 10 and 7 children under 10, i.e. 11 individuals in all (7½ "persons") would be entitled to a house no larger than of four apartments. It is obvious that by this standard the living room must inevitably be used as a sleeping apartment. [43]

Prior to 1935 broadly the same standard was applied to rehousing operations in Scotland by the Department of Health and the local housing authorities. The Department of Health's Circular No. 27/1930, for example, laid it down that a new house of two apartments should be regarded as providing accommodation for three persons; a house of three apartments for five persons; a house of four apartments for seven persons, and so on. This standard also assumed

that the living-room would be treated as a sleeping apartment. [44]

In England and Wales, on the other hand, although the penal overcrowding provisions are precisely the same as those laid down in the Housing (Scotland) Act, 1935, an entirely different standard is applied for assessing the accommodation capacity of new houses by Section 136 of the Housing Act, 1936,* which is a simple re-enactment of an earlier provision contained in the Housing Act, 1930. This standard discounts the living-room entirely for the purpose of assessing the accommodation capacity of new houses and takes account of bedrooms only, in accordance with the following formula:

Two-bedroom house	. 4 persons
Three- " "	. 5 "
Four- " "	. 7 "

[45]

For the purposes of this formula "person" means any individual of any age or sex including infants under one year. Where there is more than one living-room, e.g. in houses provided with parlours, both living-rooms are discounted in the application of the standard. [46]

* Section 136 of the Housing Act, 1936: "For the purposes of the provisions of this Act which relate to the obligations of a local authority with respect to rehousing, or which relate to Government contributions to the expenses of local authorities in providing accommodation for displaced persons, the Minister [of Health], unless he is satisfied that owing to special circumstances some other standard of size or accommodation should be adopted, . . . shall treat a house containing two bedrooms as providing accommodation for four persons, a house containing three bedrooms as providing accommodation for five persons, and a house containing four bedrooms as providing accommodation for seven persons."

It will be obvious that this standard represents a much higher standard than either of the Scottish standards which we have described, and the disparity—a disparity which was, of course, already prevalent before it was given formal

expression in legislation and administrative practice—between the English and Scottish standards of rehousing is best illustrated by the comparative statistics of houses of different sizes built by local authorities in the inter-war years:

**Table of numbers of houses of different sizes built by local authorities
between 1st January, 1919, and 31st December, 1939**

Scotland

1 apartment.	2 apartments.	3 apartments.	4 apartments.	5 apartments.	6 apartments.	Total.
724 32%	26,546 11·68%	140,350 61·73%	51,691 22·74%	7,988 3·51%	48 0·02%	227,347 100%

Local Authority.	Population (1939).	Number of dwellings provided.	Dwellings of 4 rooms and more.		Dwellings of 5 rooms and more.		Parlour type dwellings, i.e. 2 living-rooms.	
			No.	%	No.	%	No.	%
Aberdeen	179,628	6,434	1,746	27·1	140	2·2	Nil	—
Dundee	178,013	8,374	1,237	14·7	161	1·9	Nil	—
Edinburgh	471,897	14,570	1,935	13·2	157	1·07	Nil	—
Glasgow	1,128,473	50,289	14,006	27·8	1,537	3·05	401	·79

[47]

England and Wales

1 apartment.	2 apartments.	3 apartments.	4 apartments.	5 apartments.	6 (and more) apartments.	Total.*
7,345 84%	30,310 3·47%	134,658 15·43%	365,729 41·89%	260,310 29·82%	74,681 8·55%	873,033 100%

* Figures relate to period 1919 to 1935. Comparable statistics for later years are not yet available.

Local Authority.	Population (1939).	Number of dwellings provided.	Dwellings of 4 rooms and more.		Dwellings of 5 rooms and more.		Parlour type dwellings, i.e. 2 living-rooms.	
			No.	%	No.	%	No.	%
Birmingham	1,052,900	51,681	48,555	93·95	12,120	23·45	11,997	23·21
Manchester	727,600	30,991	25,855	83·42	6,659	21·48	6,554	21·14
Leeds	497,000	22,044	14,499	65·77	4,323	19·61	2,332	10·57
Liverpool	822,400	37,494	33,238	88·64	12,938	34·50	12,379	33·01

[48]

Broadly, the effect of the difference between the English and Scottish standards of rehousing can be expressed in this way. In the inter-war years 73·7 per cent. of all houses provided by

local authorities in Scotland were of three apartments and less and only 26·3 per cent. were of four apartments and more. In England and Wales, on the other hand, the proportions were

more than completely reversed; only 19·7 per cent. of all houses provided by local authorities in England and Wales were of three apartments and less while 80·3 per cent. were of four apartments and more. It is true that the areas of rooms of the houses built in Scotland were larger, but this is more than offset by the fact already mentioned that the doctrine of "minimum capacity" necessitates each apartment in municipal houses in Scotland being much more intensively occupied. When it is borne in mind that the 1931 Census showed that 71 per cent. of all houses in Scotland were of three apartments or less as opposed to only 15 per cent. in England and Wales, it is not surprising that overcrowding in Scotland is proportionately six times more acute than overcrowding in England and Wales. It is, however, surprising and gravely disturbing that the houses built in the inter-war years by local authorities in Scotland have made no substantial contribution towards the reduction of the disproportionately large number of houses of three apartments and less which constitutes the hard core of the overcrowding problem in Scotland. Indeed, overcrowding in houses built by local authorities in Scotland was found in 1935 to be higher than overcrowding throughout the country as a whole and over four and a half times as great proportionately as overcrowding in houses built by local authorities in England and Wales. Of all houses built by Scottish local authorities down to the end of 1935, 34,560 or 23·1% were found to be overcrowded as compared with an overcrowding percentage of 22·6% for all houses in Scotland, the corresponding percentages for England and Wales being 5·1 and 3·8 respectively. Of these 34,560 houses 11,281 (or 32%) were of two apartments and 19,806 (or 57%) were of three apartments, these two categories together constituting 90% of the total number of overcrowded houses owned by local authorities in Scotland. These statistics amply demonstrate the deplorable results of persistence in the policy of building undersized houses and of the application of standards of rehousing which imply that families rehoused are, as it were, just on the borderline of overcrowding their houses when they take up their new homes. [49]

There are various reasons why the Scottish standard of rehousing has been so much lower than that applied in England and Wales:

(a) The housing situation in Scotland was felt to be so acute that the local authorities and the Department of Health for Scotland were of opinion that they could not do more than look forward to the rehousing of the population in accordance with the minimum overcrowding standards laid down in the Act of 1935; [50a]

(b) Larger houses involve higher costs and

economic conditions in those areas in Scotland where housing needs were most acute in the inter-war years were so depressed that, on the whole, rent levels in municipal houses in Scotland were lower than in corresponding houses in England and Wales. In 1937 over 40 per cent. of municipal houses in Scotland were let at rentals, exclusive of rates, of 6s. per week or less, whereas at the same date the corresponding percentage of municipal houses in England and Wales let at these rentals was only 29 per cent. These percentages exclude municipal houses in Glasgow and London, the rents of which are high in comparison with rents in other areas. The proportions of municipally owned houses in these cities let at rents in excess of 10s. per week exclusive of rates were 43 per cent. and 55 per cent. respectively, as contrasted with percentages for the respective countries as a whole of 4·3 and 5·7.

[50b]

While we appreciate the apparent cogency of these arguments as applied to the specially difficult conditions which prevailed in certain areas at various periods in the inter-war years, we should deplore their being accepted as general principles to be applied without question and without discrimination for the purposes of post-war housing policy, and we have the following observations to make on each of the questions involved:

(a) As we emphasise in the concluding paragraphs of this chapter (paragraphs 76-77) and as has been made clear in the introductory chapter of this report, the main defect of Scottish housing conditions in the past has been the building of houses which in terms of rooms per house have been inadequate, both in themselves and in relation to standards which have been found practicable and desirable in England and Wales. This difficulty would not perhaps have been so serious if the houses had been designed for a limited length of life on the expiry of which other houses providing higher standards of living space had been or might be expected to be available. In point of fact, however, the houses so built have an expectation of life of about 60-100 years and it is our firm belief that houses of such durability should be designed with a longer view of ultimate requirements than may seem to be dictated by the exigencies of a particular situation or a particular time. We are glad to find in this connection that the deplorable conditions of overcrowding in Scotland disclosed by the overcrowding survey carried out in 1935, which threw into such sharp relief the inadequacy of existing housing accommodation in terms of the standards with which we have been concerned in this chapter,

brought a marked change of policy in regard to the sizes of houses built by local authorities in Scotland and resulted in the provision of a larger proportion of houses of larger sizes in the years 1936 to 1939. It is also encouraging to find that the total output of houses built in these years was actually much higher than the output secured in the preceding years, when both in terms of numbers of rooms and in standards of room areas substantially smaller houses were being built. For example, in 1938, when 19,160 houses were built by local authorities alone in Scotland, the proportion of houses of four apartments and over comprised in this total was 76 per cent. These figures compare favourably with the corresponding figures for 1933 of 15,679 and 25 per cent. respectively.

We conclude that once the initial difficulties of the immediate post-war situation have been surmounted, a properly planned and comprehensive housing programme, carefully related to the resources of the building industry, will enable effect to be given to the higher standards of accommodation which we have laid down in this chapter without detriment to the satisfaction of immediate needs and with the greatest possible advantage to the long term improvement of Scottish housing conditions. [50c]

(b) The question of rents in the immediate post-war period is likely to be one of outstanding importance but is not directly related to our present terms of reference. Rent levels and standards of accommodation are, however, so intimately associated that we feel bound to make some observations of a general nature on the issues involved. We should emphasise in the first place that all our evidence is unanimous in its view that higher standards of accommodation and equipment are worth paying for. Both in written evidence and in the course of our visits to numerous housing estates we did not find a single expression of dissent from this point of view. Secondly, a deflationary policy on rents must in the long run tend to depress housing standards and to depress economic conditions and wage levels generally. Thirdly—and this is a consideration which we hope to have an opportunity of investigating at greater length in further inquiries which we expect to undertake—if the building of houses for letting and for owner occupation by agencies other than local authorities is to make a real contribution, as it must, to the satisfaction of Scottish post-war housing needs, it is essential in our opinion that good houses, providing good standards of accommodation and up-to-date equipment, should be more highly valued by

the tenant in terms of the rent which he is prepared to pay than the accommodation which he has so far been compelled to tolerate. We appreciate, of course, that rents may require adjustment to suit the circumstances of particular areas and of individual tenants. It is much to be preferred, however, that these adjustments should take the form of rebates below the standard rent level rather than that rents in general should be maintained at an artificially depressed level. In the past this has been achieved by some local authorities by the operation of rent rebate schemes. In brief, we think it essential to establish after the war a proper relationship between the general level of rents of new houses and the higher standards of accommodation to be provided, without prejudice to the provision of appropriate machinery to enable rents to be adjusted where necessary to suit particular circumstances and needs. [50d]

Health and Housing

We have already emphasised the two fundamental questions on which minimum standards seem to be essential from the medical point of view.

On the first question—standards of space per person—there is little value in laying down a standard applicable to the house as a whole and not related to individual apartments. Moreover, the specific standards of space per person which we propose to recommend must necessarily be based on bedrooms. Bedrooms are the only rooms in the house which are occupied for a sufficiently long period each day in circumstances which enable standards of space per person to be of valuable application. Again, living-rooms are likely to be better ventilated in so far as this depends on the frequent opening and closing of doors, movement within the room and an open fireplace commonly in use. We therefore recommend that a uniform standard applicable throughout the country as a whole should be applied to regulate the amount of space to be provided in bedrooms in all new houses to be built in Scotland either by local authorities or by private enterprise. In the past, as we have seen, regulations of this type have normally been framed in terms of cubic capacity, but we are advised that from the health point of view, given a minimum ceiling height, the essential requirements are adequate floor space and satisfactory ventilation. Our conclusion therefore is that in future such standards should be expressed in terms of floor area, and that each two-person bedroom should be designed on the basis of an allocation of a

minimum area of 60 square feet per person, giving a total minimum area per bedroom of 120 square feet. [51]

Should it still be found desirable for the purpose of statutory provision to express the minimum standard size of two-person bedrooms in terms of cubic capacity, then the minimum permissible ceiling height of 8 feet should be taken as the maximum for the purpose of calculating such capacity. In other words, the cubic capacity of a bedroom with 120 square feet of floor area should be taken as 960 cubic feet even if the ceiling height is, in fact, more than 8 feet; and 960 cubic feet would be the standard minimum for bedrooms of this type. For the purpose of calculating the areas and cubic content of rooms with camp ceilings the usual rules should be applied; that is, no account should be taken of those parts of the room area over which the ceiling height is less than 5 feet, and heights of between 5 feet and 8 feet should be taken as 8 feet for the purposes of calculating cubic content. [52]

On the second question—standards of persons per room—we see no reason for perpetuating the present gross disparity between the English and the Scottish standards of rehousing. We particularly deplore the fact that under our present Scottish standards: (i) the living-room must always be treated as a sleeping apartment; (ii) a distinction is made between adults and children; and (iii) that infants under one year are discounted. Medical evidence which we have received and the advice tendered to us by the Secretary of State's Medical Advisory Committee make it perfectly clear that these three consequences of the present Scottish standards cannot be justified from the medical point of view. It is obviously contrary to the most elementary principles of domestic hygiene that members of a family should be compelled to sleep in the one apartment in the house which is in use throughout the whole day and in which all the social activities of the home are centred. Moreover, children and infants are more susceptible to air-borne infection than adults, and in so far as standards of domestic living space are to have any hygienic significance such standards must clearly take account of this difference in susceptibility to infection. In these circumstances, there would seem to be no justification for the Scottish practice of treating children and adults on a different basis and we accordingly recommend the adoption in legislation at the earliest opportunity of standards equivalent to those laid down in the English Housing Act of 1936. [53]

Future standards

When we come to our detailed recommendations in the light of the principles which we have just formulated, we feel bound to keep in mind that the whole question of standards of living space in relation to individual apartments in the house is not purely a medical one. Medical principles provide us with basic minima below which we must not go if the health of the people is to be safeguarded, but there are other positive factors which necessitate standards rather higher in some circumstances than those required on medical grounds alone. We take account of these factors in our detailed recommendations which follow on the sizes of individual apartments. [54]

Floor Areas

BEDROOMS The minimum standards laid down by the Department of Health in 1935 (paragraph 6 of D.H.S. Circular No. 76/1935) are as follows:

First Bedroom	. 150-160 square feet
Second "	. 120-130 " "
Third "	. 110 " "
Fourth "	. 90-110 " "

It will be observed that with the exception of the minimum area prescribed for the third and fourth bedrooms these sizes give a floor area above the minimum which we have recommended for a two-person bedroom. [55]

It seems to us that while there are good reasons for making the first bedroom larger than the other bedrooms because it is the parents' bedroom, normally containing the best furniture, etc., there is insufficient justification for differentiating between the sizes of the subsidiary bedrooms. We therefore recommend that for the purposes of long-term post-war housing policy all subsidiary bedrooms should be as far as practicable of the minimum standard size of 120 square feet already specified. The minimum laid down by the Department of Health in 1935 of 150-160 square feet for the principal bedroom appears to us to be adequate. [56]

It will be clear that we have been considering so far only two-person bedrooms, but we feel bound to refer briefly to the one-person bedroom which is so common in almost all housing schemes in England. We have seen that for the purposes of rehousing in England the following formula is applied:

Two bedrooms	. . 4 persons
Three "	. . 5 "
Four "	. . 7 "

[57]

It is obvious from this formula that the three-bedroom house in England—by far the predominant type—is designed on the basis that two of the bedrooms will be two-person bedrooms while the third bedroom will be a one-person bedroom and, in fact, the great majority of three-bedroom houses built by local authorities in England are designed as regards bedroom areas on this basis, *e.g.* first bedroom, 150 square feet, second bedroom, 100–120 square feet; third bedroom, 80 square feet.* We have considered whether, in suggesting that the Scottish standard be brought into conformity with the English standard, the English formula should be followed precisely. There are admittedly certain advantages in having a small single-person bedroom in each house. It solves the problem of sex separation, *e.g.* in the average family which contains father, mother, and three children of opposite sexes; it enables the infant or small child to sleep in a separate apartment, an arrangement which is most desirable from the health point of view. On balance, however, it would in our opinion be retrogressive to reduce the size of the third bedroom below the present standard. We therefore recommend that the following formula should be adopted for the purposes of assessing the accommodation capacity of new houses to be built in Scotland after the war:

Two-bedroom house	. 4 persons
Three- " " .	6 "
Four- " " .	8 "

with the addition of two persons for each additional bedroom, on the footing that each bedroom would be a two-person bedroom in accordance with the standards which we have recommended. In the actual application of this standard for the purpose of housing or rehousing individual families, account would of course have to be taken of the need for ensuring sex separation in such a way that the living-room would not require to be used as a sleeping apartment, even if this involved in some cases (*e.g.* of a family containing father, mother, and two older children of opposite sexes) the allocation of a house containing a number of bedrooms larger than would be required by a rigid adherence to the standard. [58]

LIVING-ROOMS The Department of Health's Circular No. 76 already referred to provides that the living-room should have a minimum floor area of 180 square feet. We regard this minimum as adequate for the smaller size of house, *i.e.* the two-bedroom house, but unless a parlour is provided or unless additional accommodation in the form of a dining annexe is made available this area is, in our view, inadequate

for houses of larger sizes and we therefore recommend a scale of increase as follows:

No. of Bedrooms. Minimum Area of Living-room.

2	180 square feet
3	190 " "
4	200 " "

with the addition of 10 square feet to the area of the living-room for each additional two-person bedroom contained in the house. [59]

We have considered carefully in the light of the evidence which we have received the following possible distributions of living, as distinct from sleeping, accommodation in the house: (i) living-room only, (ii) living-room and parlour, (iii) living-room with dining annexe, (iv) living-room with dining annexe associated with the kitchen-scully and not with the living-room proper. We have the following recommendations to make on each of these suggestions: [60]

(i) *Living-room only.* Almost all the houses provided by local authorities in Scotland in the inter-war years were designed to contain only one living-room irrespective of the number of other apartments contained in the house. It has generally been held that the provision of a scullery which takes cooking and washing away from the living-room enables the living-room to be kept as a tidy apartment in which all the main social activities of the home can be carried on. It has also been maintained that the houses built in the inter-war years provide in this respect such improved standards of accommodation over the average Scottish working-class house erected prior to the last Great War that there is no widespread demand for any increase in living-room accommodation, either in the form of an additional living-room—that is, a parlour—or in the form of a dining annexe. We cannot accept this conclusion. It has been common practice in the inter-war years for all English housing authorities to include in their programmes a proportion of houses which contain additional living accommodation in the form of a parlour. Indeed, in many areas in England the proportion of such houses is as high as 20 per cent. We see no reason why Scottish standards of accommodation should fall short of standards which have been deemed practicable and desirable in England, and the evidence which we have received supports this conclusion. We therefore recommend that Scottish local authorities should be encouraged to provide additional living-room accommodation in a proportion of the houses which they will build after the war. The proportion will, of course, vary according to the needs of each particular district and we do not feel obliged to make a

* Ministry of Health Circular No. 1539/1936.

specific recommendation on this point. As regards the form which such additional living-room accommodation might take, there are various alternatives which we examine in the following paragraphs. [61]

(ii) *Living-room and Parlour.* A good deal of the evidence which we have received stresses the need for a parlour as a standard provision in all "family" houses to be built in Scotland after the war. The vast majority of housewives prefer to have a sitting-room which can be kept tidy and can be used for the reception of visitors and the entertainment of friends and in which children can do their homework in peace and quietness. We are impressed with these contentions and, for the reasons which we have already given, we think that a proportion of the houses to be built by local authorities in Scotland, particularly houses containing three bedrooms or more, should be provided with a parlour in addition to the ordinary living-room. [62]

(iii) *Living-room with Dining Annexe.* We appreciate that the provision of a parlour will not in all circumstances and areas be the most appropriate way of providing the additional living accommodation on which so much emphasis is laid in our evidence. In many cases the provision of a dining annexe, capable of being curtained or otherwise partitioned off from the living-room proper, will provide for a sufficient degree of segregation between the separate functions to be performed in the living-room of the normal family house to obviate the need for a parlour. This will especially be the case in houses with three bedrooms or less and we therefore recommend that careful consideration should be given to the possibility of providing a dining annexe in association with the living-room in a proportion of the houses to be built after the war. [63]

* (iv) *Living-room with Dining Annexe associated with the Kitchen-Scullery.* We realise that in many areas it is the established practice for most meals, particularly breakfast and the midday meal, to be taken in the kitchen-scullery rather than in the living-room. There are good and sound domestic reasons for this practice where it exists. For example, in rural areas the worker may not wish during his midday break to sit down to a formal meal in the living-room, and the use of the living-room for such meals is more obviously inconvenient to the housewife when the children take their meals at different times from the man of the house. For substantially the same reasons, in many industrial districts also the kitchen-scullery is used for the

morning and midday meals, and where workers are on shift-work it is not uncommon for almost all meals to be taken in the kitchen-scullery. It has been the practice in the past for both the Central Department and local authorities to attempt to resist this preference for the taking of certain meals in the kitchen-scullery by so restricting the area of the kitchen as to make it difficult and inconvenient to use it for this purpose. We are glad to find, however, that at least one local authority in England is prepared to accept, rather than to force a change in, domestic preferences in this respect. This authority has designed and built a full-scale model kitchen large enough and specially equipped to enable meals to be taken in it.

Clearly, the question whether or not the kitchen should be designed in this way is one which the particular local authority is most competent to decide. In those areas, however, where the kitchen is likely to be used as an occasional dining apartment we feel that there should be the same separation of functions as we have recommended in the case of the living-room; that is, we recommend that the most careful consideration should be given to the possibility of providing a dining annexe in the kitchen suitably equipped for the purpose. [64]

The area of the dining annexe, whether provided in the living-room or in the kitchen-scullery, should be not less than 50 square feet. [65]

KITCHEN-SCULLERY The size of the kitchen-scullery clearly depends on the following factors:

- (1) whether it is designed to enable meals to be taken in it;
- (2) whether it is designed to enable both washing and cooking to be done in it;
- (3) the amount of kitchen equipment, including larder space, which is considered necessary. [66]

* On (1) we have already suggested that, if the kitchen is to be used for meals, a space within it in the form of a dining annexe should be provided specifically for the purpose. In such circumstances we think that the existing minimum of 70 to 80 square feet (including fittings) for the kitchen proper may be regarded as adequate, with the addition of the 50 square feet already specified for the dining annexe. [67]

* On (2) we have received a great deal of evidence, particularly from housewives and from women's organisations, in favour of

* See reservations on these paragraphs by Mrs Jean Mann (page 96).

washing being done in a separate apartment from that in which meals are prepared. This evidence stresses the undesirability of the steam associated with the daily and weekly wash being allowed to circulate in the same apartment in which meals are prepared and food is stored. We are impressed with these objections and we feel that consideration should be given to the possibility of providing in all "family" houses a "utility room" in which washing can be done and which would serve as the "general purposes" workroom of the house. Such a room, for example, will be the room in the house in which boots could be cleaned, occasional jobbing repairs carried out, etc. We go into the detailed questions of the equipment, etc., involved in this suggestion in Chapter V of the report.* For the purpose of the present recommendation we consider that if the kitchen is to be subdivided in this way the utility room should comprise not less than 40 square feet. [68]

On (3) we have received expressions of opinion in the strongest terms, particularly from housewives and from women's organisations, that kitchens should be much more amply equipped with storage accommodation and other essential conveniences than they have been in the past. We deal in detail with this question in Chapter V. It is sufficient for us to record at this point that the additional equipment which is demanded, and which in our view should be provided, will of course result in a net addition to the floor area of the kitchen (and utility room). We feel that in no circumstances should the effective floor area, that is the floor area independent of the space taken up by fittings and equipment, of the kitchen-utility room be less than 70 square feet excluding the area of the dining annexe if any. [69]

In some circumstances, and especially in rural areas, it may be found more convenient to provide a large "all purpose" kitchen, either with or without a utility room, so that the whole of the effective floor area may be available for use by the housewife as she finds most convenient. In the long-term plans incorporated in this report we illustrate houses provided with kitchens of this type. [70]

BATHROOM - W.C. APARTMENT In general, we are not dissatisfied with the size of this apartment as provided in local authority houses in the inter-war years. We deal in Chapter IV with the various suggestions made to us for the separation of the apartment containing the w.c. from the apartment containing the bath and washhand basin. Where all fittings

are included in the same apartment, the area of the apartment should be not less than 36 square feet. [71]

Lobby and Passage-Space

Every house should have an ample hall or lobby. Too many of the houses which have been built in the inter-war years seem to us to be unnecessarily cramped in this respect and we have attempted in the model plans incorporated in our report to suggest how more ample lobby and hall accommodation can be provided. Lobbies should also be adequately lit, preferably by direct, or where this is not possible by borrowed, lighting. Obviously, the actual sizes of halls and lobbies have to be considered in relation to the general plan and to the provision made for cloakroom accommodation, pram accommodation, etc. We deal with these questions in greater detail in Chapter V of the report.

We do not think that the amenity and convenience of the house should be sacrificed by cramping the widths of internal lobbies and passages. We think that in each case a net finished width of 3 feet 3 inches to 3 feet 6 inches should be aimed at. [72]

Stairs and Staircases

Staircases should always be planned without wheeling steps and should be designed to permit of the easy movement of furniture. We think that all internal staircases should have a minimum width clear of the balustrade of 3 feet 3 inches and common staircases in flats a width of 4 feet. [73]

Ceiling Heights

The present standards of ceiling heights are as follows:

Ground floor flats in blocks of three or more storeys .	9 feet
Ground floors of cottages, all flatted houses, and upper floor flats .	8 feet 6 inches
Upper floors of two-storey cottages .	8 feet

In certain areas a reduction of 6 inches is normally made on the ground floors of cottages and the upper floors of two-storey cottages. [74]

We regard the present dimensions of ceiling heights as satisfactory. Any increase over these heights involves unnecessary expense in building, decoration, redecoration, heating, and cleaning, and the additional expenditure involved in providing higher ceilings could be utilised to greater advantage elsewhere in the house. [75]

* See reservation on this paragraph by Mrs Jean Mann (page 96).

What the new standards will mean

The effect of the adoption of the various recommendations which we have made in this chapter will, we hope, be a substantial improvement in the standards of living space to be made available in houses to be erected in Scotland after the war. To take but one example, if, as we recommend, the living-room in future ceases to be reckoned as a sleeping apartment, it would follow from the statistics quoted in paragraph 48 that even if Scottish local authorities made no change in their pre-war practice in other respects (e.g. by providing additional living accommodation), the majority of houses built by them after the war would require to be of 3 bedrooms, that is, of 4 apartments. But these improvements we feel bound to point out will do little more than bring the standard of housing in terms of persons per house and persons per room up to the standard which has been adopted in England for the past twenty-five years. The main defect of housing conditions in Scotland at the present time is the tremendously large number of houses of three apartments and less which give rise to almost all the cases of gross overcrowding in the country. We have seen that these deplorable conditions are the result of serious under-provision in terms of rooms per house in the great building booms of the latter half of the nineteenth century, accentuated by the fact that 73·7 per cent. of the 230,000 houses built by local authorities in the inter-war years have been of three apartments or less. It seems to have been extremely difficult to persuade the authorities responsible for house building in Scotland to take a long view on this question. We feel bound to keep in mind that the houses covered by our present recommendations will form part of the general pool of housing accommodation in the twenty-first century. Unless firm measures are taken now to correct and adjust the uneven proportions of houses of different sizes in Scotland it is obvious that in another generation the same problems of cramped living space will have to be faced again. [76]

We should make it clear that the precise proportions of houses of different sizes to be built will require to be determined by the central and local authorities in the light of the conditions of each area. We think, however, that in this respect the broadest possible view should be taken of local requirements. In our opinion it would be a profound mistake to concentrate, for example, on the building of houses of a size strictly limited to particular needs at a particular time. Quite clearly in the immediate post-war years one of the most

predominant needs will be the provision of housing accommodation for very small family units created principally by marriages which have taken place during the war. The tendency to take a short view of the housing requirements of our people in Scotland is so strong that there is a real danger of an irresistible demand being made for the building of very small dwellings, even as small as of two apartments, to meet these special needs. The result would be that in a comparatively short space of time, as the individual families grow larger and grow up, such houses would be quite inadequate for normal family life and additional houses of a larger size would then be required. The social discomfort and inconvenience which would be involved by wholesale changes of occupancy would be gravely disturbing to the national life, quite apart from the fact that the over-building of undersized houses will have represented a tremendous wastage of building materials and building effort. [77]

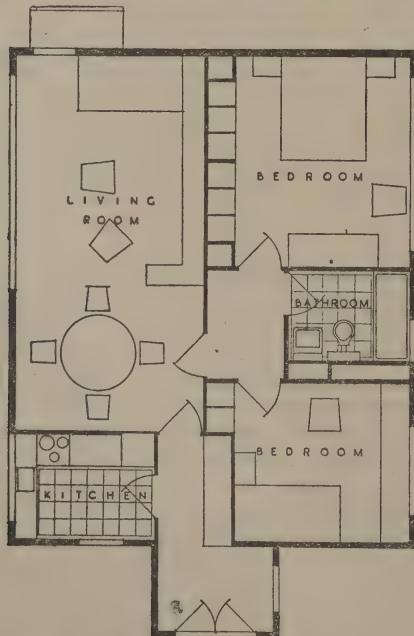
For all these reasons we have been impressed with the representations made by several organisations who have submitted evidence to us to the effect that the long-term housing programme after the war should be based on the provision of a standard "family" house comprising *either* a living-room and parlour *or* the variations of this arrangement which we have ourselves suggested in paragraphs 60-65 of this chapter, plus three bedrooms. Those who have made this suggestion point out that if the population of Scotland is to be maintained, even at its present level, we must contemplate that the average family will comprise at least five persons, that is, two adults and three children, and that therefore the average family should be taken as the basic unit for determining the standard size of house to be built. They also add that in proposing that a house of this size should be "standard" they mean that local authorities responsible for general housing should be required to show a sufficient reason why houses of a size greater or smaller than the size suggested should be provided in their areas. We hope that the effect of the standards which we have laid down in this chapter and particularly of our recommendations that additional living-room accommodation should be provided either in the form of a parlour or in the form of the variations of this arrangement suggested in paragraphs 60-65, coupled with our proposal that all persons should be treated as individuals and that the living-room should be discounted as a sleeping apartment for determining the capacity of the house, will be in the direction of the acceptance of this suggestion; accordingly we do not think it necessary to give a formal recommendation in the terms of the suggestion. [78]

Chapter IV: PLANNING THE HOUSE

Basic principles

THE most important consideration determining the general plan of the house is the provision or absence of a lobby giving independent access to the separate apartments. We are familiar with modern developments in house planning which eliminate the lobby as an essential feature and provide inter-communicating rooms and we have seen excellent examples of this type of plan in blocks of modern flats which we have visited in London. In our opinion, however, planning of this kind would, except in special circumstances, be inappropriate in Scottish conditions, and we therefore recommend that as far as practicable the living-room and all bedrooms should have independent access to a hall or lobby. There are some obvious exceptions to this general principle and we deal with these when we consider the detailed planning of individual apartments in paragraphs 92-93. [79]

As regards planning considerations common



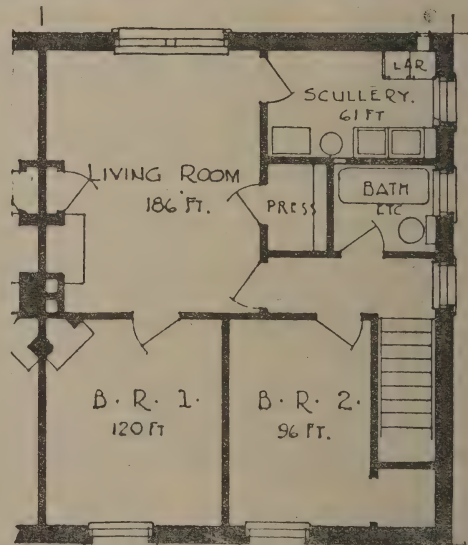
Plan A. Illustrating a modern flat, the planning of which eliminates the lobby as an essential feature (para. 79).

to all living and sleeping apartments in the house, we have the following subsidiary recommendations to make:

(a) The aspect of the various apartments and their relationship to daylight and sunlight, traffic noise, etc., all require careful consideration and much of our evidence emphasises the fact that due regard has often not been paid to these matters. [80]

(b) All rooms should be suitably planned for the articles of furniture which they have to contain. In many houses it is only too common to find walls broken up by doors and windows so inconveniently located that it is practically impossible to arrange the principal articles of furniture in appropriate and convenient positions. [81]

(c) Great care should be taken to ensure that the general plan of the house eliminates through draughts. We have examined many plans, excellent in other respects, which



Plan B. This plan—selected from a brochure of plans issued to local authorities before the war—has many of the faults noted in this chapter. To mention only the most obvious defects—it is impossible to sit comfortably round the living-room fire; the five doors opening into the living-room leave no space for furniture; the direct alignment of bedroom-window, door, and living-room window creates a through draught in both rooms.

contained this radical defect. In some circumstances special measures may be required to secure this result. Front porches, for example, can contribute substantially to the comfort and amenity of the house, particularly in exposed situations in rural areas. [82]

Grouping the rooms

Living-room-Kitchen-Parlour

We have already described various possible combinations of living accommodation and kitchen space in the house. We are now principally concerned with the details of the relationship between these apartments. In the first place, it will be obvious that these apartments should be located on the ground floors of two-storey cottages and that in houses of all types they should be so situated as to obtain the maximum of sunlight and daylight. It is in these apartments that the housewife spends most of her working day and their aspect should therefore be most carefully considered by architects. For the same reason, it is of maximum importance that the living-room and kitchen should be planned to suit the convenience of the housewife and to minimise the amount of movement involved in passing from one room to another. For this reason, where there is no direct inter-communication between the living-room and kitchen, we think that a *serving hatch* should be provided and that "*through*" *cupboards* should be installed wherever practicable (see paragraphs 196-7). [83]

Bedrooms

It is clearly desirable that all bedrooms should be planned in close proximity to one another, that independent access to each bedroom should be arranged and particularly that no bedroom should open off a living apartment. [84]

In two-storey cottages bedrooms will normally be located on the upper floors. In cottages of five apartments containing four bedrooms it is normal practice to provide one of the bedrooms on the ground floor. We commend this arrangement. A bedroom on the ground floor, especially if it has a coal fireplace, is of inestimable value when there is sickness in the home. [85]

Bathroom-W.C. Apartment

We have received much evidence for and against the provision of separate apartments for the bath and washhand basin and for the w.c. Our conclusion is that in houses with three bedrooms and less all these facilities should be in one apartment. In houses with more than

three bedrooms either an additional w.c. apartment should be provided or the sanitary and principal washing conveniences should be in separate apartments. It is important to emphasise, however, that, for obvious reasons of personal hygiene, wherever a separate apartment is provided for the w.c., it should also include a small washhand basin. [86]

We have noticed no marked expression of preference in favour of these apartments being located on the ground floor or upper floors of two-storey cottages and we therefore consider that this question can simply be determined by the general requirements imposed by the particular plan. In certain areas, however, particularly rural areas and industrial areas where workers are engaged in trades which involve the soiling of hands and clothing, it would be a great convenience if the apartment containing the w.c. and washhand basin could be provided on the ground floor. Such an arrangement would also be convenient for young children and elderly and infirm people. [87]

Planning for convenience and amenity

Kitchen-Utility Room

We have already emphasised the importance of these rooms being so planned as to give the maximum amenity and comfort to the housewife. Special regard must be paid to the lighting arrangements in these apartments. The varied and complex tasks which the housewife has to perform require for their easy exercise high standards of natural and artificial lighting and the equipment, fittings, and conveniences should be so placed that they will be well lit whenever they are in use. It is only too common to find, for example, that the planning of the kitchen necessitates the work-table being placed in such a position that the housewife has to stand with her back to the light while she is using the table. Again, the cooking stove may be so placed or designed that the door of the stove, when open, cuts off daylight or artificial light or both. Other faults of this kind could be enumerated but we think that the majority would be avoided or, if this is impracticable in particular cases, their effects mitigated if two main principles of kitchen-lighting were established: [88]

(i) Most building regulations provide that, to ensure adequate natural lighting, the window area in any room should be not less than one-tenth of the floor area of that room. We agree with those authorities who have represented to us that this standard is in-

adequate in the kitchen—the workroom of the house, where the highest standards of natural lighting are essential—and that in this apartment a standard of one-eighth should be aimed at. [89]

(ii) We should like to see the principles of local supplementary lighting, so common in other rooms (e.g. in living-rooms for writing, in bedrooms for reading, etc.), applied to the kitchen-utility room although, of course, in these apartments the extra lighting might have to take the form of a fixed bulb and not a movable lamp. We see no reason why the housewife should have to put up with lower standards of lighting in doing essential household work than would be tolerated in the factory, workshop, or office or than can be enjoyed in other rooms of the house. We, therefore, recommend that all kitchens should be equipped with a supplementary lighting point, preferably over the work-table or sink. [90]

Special care must be taken in planning these working apartments to ensure that the various fittings, etc., are arranged, as far as practicable, in the order of their daily use. It has been calculated that at least 60 person-hours are spent each week in these apartments. Disorderly planning involves unnecessary movement by the housewife, wastes her time and energy and makes for general untidiness. [91]

Living-room

There is one point of detail in the internal planning of this apartment which should be mentioned. Wherever a back-to-back fire is installed between the living-room and the kitchen, it is important that the entrance door to the living-room should be so planned as to leave adequate sitting space on both sides of the fire. Where the living-room communicates directly with the kitchen the communicating door must, of course, be located in the same wall as the back-to-back fire. This results in the space round the fire being wasted and makes it difficult to use such space either for fixed or movable furniture. We therefore recommend that in houses with back-to-back fires the kitchen should not communicate directly with the living-room but that a *hatch* or “*through*” cupboard should be installed. [92]

The planning of the living-room in small houses and flats for aging persons requires special consideration. Aging persons usually prefer a combined living-room and bedroom and the best arrangement, in our opinion, is that by which the bedroom is a proper apartment or sub-apartment separately ventilated with a separate window, but capable of being

curtained or otherwise partitioned off from the living-room. This bedroom annexe should be at least 80 square feet in area and designed to permit of free movement round the bed and for built-in wardrobe accommodation and occasional heating, e.g. by electric fire. In no circumstances do we consider a “box bed” or “bed recess” appropriate to this or any other type of house. [93]

Bedrooms

We have already mentioned the main points which should be kept in mind in planning the sleeping apartments of the house, but some questions of detail call for special comment. In the first place we think that all type plans should specifically show the location of the beds in these apartments and should indicate their size. Secondly, bedrooms should wherever possible be so planned that the head of the bed will not have to be located facing the light or in a draught between the window and fireplace or between the door and fireplace. These may seem to be elementary questions of bedroom planning but we have found them so often ignored in various plans which we have inspected that we have thought it worth while to refer to them specially. [94]

Bathroom-W.C. Apartment

The internal planning of the bathroom-w.c. apartment is primarily determined by the placing of the various fittings, bath, basin, w.c., w.c. cistern, etc., and we deal with these points in detail in Chapter V (paragraphs 109–113 and 201). [95]

Balconies

In flatted houses and flats we foresee an increasing demand for individual verandah balconies which are such an accepted feature of modern flat development in England and elsewhere and which enable any young children in the family to enjoy fresh air and sunshine under the eye of the mother. We think that in suitable areas and where the layout and aspect of the flatted houses or flats is appropriate, balconies might be provided. It is important that balconies should be so designed and constructed that young children can look out from them and see what is going on without being tempted to clamber on to the parapet of the balcony for this purpose. [96]

General Storage and Outbuilding Accommodation

Outbuilding accommodation, where required, should in our opinion always be provided with the house so that both in standards of con-

struction and design it may conform to the general design of the house. We emphasise elsewhere in this report the undesirability of

leaving tenants to make their own arrangements for the provision of accommodation of this kind (paragraph 140). [97]

Chapter V: SERVICES, FITTINGS AND STANDARD EQUIPMENT

Servicing the House

Water Supply, Sanitation and Drainage

WE assume that every new house built in Scotland after the war, wherever erected, will be provided with an internal water supply and with proper sanitary and drainage facilities. The provision of these services where "reasonably practicable" in existing houses is already a statutory requirement, but in practice the inadequacy and deficiency of these services, in rural areas particularly, is deplorable. In 1938, the latest year for which precise figures are available, 21,240 houses in the cities and burghs of Scotland were without an inside water supply. The position in rural areas is very much worse. Surveys carried out in 1936 of three typical rural parishes for the purposes of the Scottish Housing Advisory Committee's Report on Rural Housing in Scotland showed that of all rural houses in the parishes surveyed 67 per cent. had no internal water supply, and in the case of 42 per cent. of the houses surveyed water had to be carried for a distance of more than 25 yards. The three parishes surveyed for the purposes of the Rural Housing Report were strictly typical and were not chosen as parishes in which housing conditions were notoriously bad. On the assumption that the inadequacy of domestic water supply shown up by these surveys is typical of rural areas in Scotland as a whole, it is reasonable to give the following estimate * of the numbers of houses in rural areas in Scotland which are or are not provided with an adequate domestic water supply:

Houses with piped internal water supply.	49,400—33 per cent.
--	---------------------

Houses with outside water supply only .	100,250—67 per cent.
(a) Within 25 yards of the house .	37,450—25 per cent.
(b) Beyond 25 yards	62,800—42 per cent.

[98]

The general inadequacy of water-supply services in rural areas in Scotland has already been commented upon fully in the Report of the Committee on Scottish Health Services (Cmd. 5204, paragraphs 361–363) and in the Scottish Housing Advisory Committee's Report on Rural Housing (paragraphs 47–49), to which we have already referred. [99]

The provision of a piped supply to every house is, in our opinion, a basic essential. The carrying of water should not have to be part of the domestic round, and where water has to be carried even a few yards a high standard of domestic and personal cleanliness means constant and heavy work for the housewife in all weathers. We therefore endorse in the strongest terms the recommendation contained in the Report on Rural Housing that "the Department of Health should initiate measures at the earliest possible moment to bring about, so far as possible, the regional control and development of water supplies." The Report of the Committee on Scottish Health Services has already emphasised the inadequate and unsatisfactory arrangements that exist at present for the distribution of water supply in many areas in Scotland and has called for a technical survey of the water supply position and for a comprehensive enquiry into the whole question with the object of securing a more economical and more effective use of water resources. We understand that the first of these recommenda-

* For the purposes of these estimates all houses built since 1919 and all houses of over 5 apartments have been disregarded on the assumption that such houses are adequately provided with water supply and sanitary conveniences, and the landward areas of six counties which on balance have been considered not to be typically rural have not been included: these counties are Clackmannan, Dunbarton, Fife, Lanark, Midlothian and Renfrew.

tions is now being carried into effect and that the Department of Health have at present in hand a comprehensive survey of water supplies with special reference to (a) the sources, quality, quantity, etc., of available supplies, (b) the need for improved or extended supplies, and (c) new schemes projected by water undertakings. We hope that these investigations will be pressed forward with all possible speed so that effect may be given to the second recommendation at the earliest possible moment. [100]

The position in regard to sanitary and drainage facilities in domestic dwellings in Scotland is even more unsatisfactory. In 1938, the latest year for which precise figures are available, there were in the burghs and cities of Scotland alone 291,527 houses or approximately 32 per cent. of all houses in burghs and cities, which had no independent water-closets. The sample surveys carried out in connection with the 1937 Report on Rural Housing show that the position in rural areas is even worse. The percentages of houses found to be with or without sanitary conveniences in the areas surveyed is indicated in the following table which also gives estimates * of the corresponding total figures for rural areas in Scotland as a whole, again assuming that the position disclosed in the areas surveyed is typical of rural areas as a whole:

Houses provided with a separate water-closet, either inside or outside the house	34,500—23 per cent.
Houses provided with a dry closet only	71,800—48 per cent.
Houses with no sanitary conveniences of any kind	43,400—29 per cent.

[101]

To sum up, on the basis of the figures which we have just quoted it is not unreasonable to assume that 405,000 houses in Scotland out of a total of 1,300,000 have either no independent water-closets, no water-closets at all, or no sanitary conveniences of any description. [102]

This is an appalling situation, and in relation to existing houses we think that local authorities should lose no opportunity of making the fullest use of their existing powers to ensure that such houses are provided with adequate sanitary conveniences. We realise, however, that in rural areas particularly the provision of sanitary facilities depends to a large extent upon expansion of main services for sewage disposal, and we, therefore, strongly endorse the recommendations made on this question in paragraphs 364-380 of the Report of the Committee on Scottish Health Services. We feel bound to point out that a comprehensive post-war

housing programme to meet the tremendous demands which we have outlined in paragraph 5 of this Report will give rise to special problems in relation to sewage and drainage services. We, therefore, attach special importance to the point made by the Committee on Scottish Health Services that co-operation between local authorities is necessary for the economical and efficient administration of drainage and sewerage and that schemes for such co-operation should be associated with the formation of regional schemes for the distribution of water supplies. [103]

There are some points relating to methods of drainage to which we should like to draw particular attention. The normal method of draining soil and waste in this country is known as the "two-pipe" system of plumbing, by which separate vertical pipes are used for waste water and soil and the waste pipes are trapped off from the soil pipes and separately ventilated. Many authorities and organisations have suggested to us that in the interests of increased economy and efficiency in construction the most careful consideration should be given to the adoption of the "one-pipe" system of drainage. This system, which is almost universal on the Continent and in the United States, results in economies of piping, works efficiently, and, if adopted on a large scale for housing purposes, would have a substantial effect in the direction of reducing building costs. It is a curious commentary on the slow acceptance of technical improvements of this nature in this country that while one-pipe systems of drainage have been economically and efficiently installed in luxury or semi-luxury buildings, little progress has so far been made in applying the system to domestic dwellings. [104]

There is no doubt that, subject to proper safeguards and provided that junctions and joints are made with the requisite degree of care and skill, the one-pipe system of drainage is more economical and satisfactory than the two-pipe system. Moreover, the one-pipe system lends itself much more readily to pre-fabrication and, in view of the urgent need in the post-war period of producing the maximum number of houses in the shortest possible time at reasonable cost, this is a consideration to which we feel bound to attach the highest importance. We therefore recommend that the one-pipe system of drainage should be generally adopted for post-war housing purposes. [105]

It has also been suggested to us that all piping both for water supply and for soil and waste should be carried internally, preferably concentrated in an *internal duct* provided with suitable access for inspection and repair. We commend this proposal for serious consideration

* See footnote on page 29.

and have included in our model plans for long-term housing types which incorporate this system. The freezing of water pipes and waste pipes is one of the bugbears of housing and there can be little doubt that a system of enclosing pipes in internal ducts would materially assist in the protection of the domestic piping system from the effects of frost. In addition, the following considerations should be kept in mind: [106

(i) the concentration of piping secured by this system, when combined with the one-pipe system of drainage, will achieve economies in cost and help to make it possible for pre-fabricated plumbing units to be manufactured on a large scale; [107

(ii) the ugliness of the festoons of pipes attached to the rear walls of domestic dwellings and especially of large blocks of flats in Scotland is only too familiar, and we would welcome a system of internal piping of proved reliability which had the effect of improving the external appearance of houses and flats in this respect. [108

Sanitary Fittings

We consider that in all houses the bath and washhand basin should be entirely separate and independent fittings. The combined bath and basin installed in a fairly large proportion of local authority houses in the inter-war period is, in our opinion, entirely unsatisfactory. [109

The w.c. cistern should in all circumstances be of the low-flushing type. [110

The bath, of which there should be a limited number of standardised types, should preferably be of the panelled enclosed type, and it would be an advantage if a simple form of shower, thermostatically controlled, could be incorporated. The convenience and value of this extra fitting has been stressed in the evidence received, particularly from local authorities within whose areas there are large numbers of workmen employed in dusty and dirty conditions. [111

A shower of simple design and easy to operate would also be of great advantage to old persons, especially if it were combined with a sitz bath which has been installed instead of the normal type of bath in the best schemes for aging persons which we have visited in England and Scotland. We therefore recommend equipment of this kind for bathrooms in houses for aging persons. [112

Taps and other metal work in these apartments should have a suitable easy-clean finish, e.g. chromium plate or the like, and these fittings also should be standardised. [113

We deal in paragraphs 151-2 and 173-9 with

the fittings, taps, sink, tub, etc., for the kitchen and utility room.

Cooking

The three common methods of cooking in houses in Scotland are by (a) solid fuel—coal, coke, etc.; (b) gas; (c) electricity. We assume that almost invariably cooking will be done in the kitchen and not in the living-room.

* **SOLID FUEL** Except in rural areas where gas and electricity supplies are not available or are too expensive, cooking by solid fuel is comparatively uncommon, but some local authorities have installed back-to-back grates which enable cooking to be done by solid fuel in the scullery. Even in such circumstances, however, these facilities are usually supplemented by gas or electric cookers and most housewives use these cookers in preference to the back-to-back grate. Alternatively, where gas is available a separate gas hot-plate is often supplied to each house where a back-to-back grate is installed. The value of supplementing the cooking facilities of the back-to-back grate in either way is obvious; it enables cooking to be done when the fire in the grate is not lit or is low, for example in summer and in the early morning. We cannot, however, regard this duplication of cooking facilities as wholly satisfactory and, in general, where gas or electricity supplies are available at reasonable cost, we should prefer gas or electric cookers to the back-to-back grate. In rural areas, on the other hand, the cooking facilities afforded by the back-to-back grate are more extensively used where this grate is installed. [114

We understand that much research is at present being devoted to the possibility of producing solid-fuel heat-storage cookers to standardised patterns at reasonable cost. We welcome these experiments to provide a unit which, in addition to its efficiency for cooking purposes, will increase warmth and comfort in the kitchen and is likely to be of special value in rural areas, especially if it can be designed to burn such fuels as peat and wood as well as coal, coke, smokeless fuel, etc. [115

GAS Where gas supplies are readily available the gas cooker is almost a standard fitment in the majority of houses in Scotland and the more modern types of this cooker have proved completely satisfactory. [116

ELECTRICITY There can be little doubt that cooking by electricity has advantages from the point of view of cleanliness over cooking by any other form of power. We have found that electric stoves have been very popular with working-class tenants where they have been installed, particularly in housing estates which

* See reservation on this paragraph by Mrs Jean Mann (page 96).

we have visited in the South of England. In most areas in Scotland, unfortunately, it is widely held that existing charges for electric power rule out the possible use of electricity for cooking purposes and we hope that the whole question of the comparative costs of various kinds of power will be fully reviewed by the Government. It is particularly important that radical measures should be taken to provide supplies of cheap electricity for all purposes in rural Scotland and we need do no more than refer to the high expectations aroused in this connection by the Hydro-Electric Development (Scotland) Act.

[117]

* It has been suggested to us that in all circumstances where both gas and electricity can be readily made available at comparable cost, houses built by local authorities should be both piped for gas and tubed for electricity so that the tenant may use for cooking purposes whichever source of power he or she prefers. As the only object of providing gas supply in domestic dwellings is to enable that supply to be used for cooking and heating purposes we think that the adoption of this suggestion would lead to a great deal of superfluous and unnecessary expenditure. Electricity is universally to be preferred for lighting purposes and we imagine that all houses in areas where electricity is available for lighting purposes at reasonable cost would be wired for heating and cooking also. In such circumstances, therefore, we feel that the local authority in each case, in consultation with the Department of Health, would require to determine at the outset the type of power which should be used for cooking purposes and would only pipe the house for gas, if gas is likely to be much more economical for cooking and heating purposes. We ourselves foresee a considerable extension of the use of electricity for cooking purposes subject to the adjustments in the general level of charges to which we have already referred.

[118]

We deal in paragraph 156 with the dimensions, finish, etc., of the cooking unit.

[119]

Space Heating

Coal is almost universally used as the main agent for space heating in domestic dwellings in Scotland. In fact, for this purpose alone it is estimated that nearly five million tons of raw coal are consumed each year in houses in Scotland, involving an *annual expenditure* to their occupants equivalent to the pre-war *capital cost* of providing 25,000 dwellings each year. It is notorious that the use of raw coal on this scale for this purpose represents a gross waste of energy and, in view of the increasing value of raw coal for its various chemical by-products, we look forward to substantial

developments in the more economical use of this type of fuel. It must also be kept in mind that the use of raw coal in domestic grates is responsible for at least 50 per cent. of the atmospheric pollution which is so detrimental to health and amenity in our cities and burghs. For these reasons, and in the light of the figures which we have quoted, reasonable additional expenditure on more efficient heating and cooking appliances which resulted in proportionate economies in fuel consumption and in current expenditure on fuel and facilitated the use of smokeless fuel would be justifiable in the national interest.

[120]

The traditional preference for the open coal fire is, however, so strong that we contemplate that houses to be built in future will contain at least one coal fire—in the living-room—and that a coal fire will also be demanded in the principal bedroom. Indeed, in the absence of central or district heating, which we discuss later, this is the minimum scale on which coal fires should be provided. We do not agree that coal fires are necessary or desirable in every bedroom in view of the efficiency of other types of space heaters and provided that suitable alternative means of ventilation can be installed in bedrooms without flues. We do not regard the common arrangement of providing an air inlet in the wall of the room near the ceiling, protected by a grating on the inside and outside, as satisfactory. This type of ventilator is intended as an outlet for the warm contaminated air which rises to the ceiling. In practice it is often an inlet for cold air (accompanied perhaps by dust), and tenants cannot altogether be blamed for their tendency to cover the opening. Where coal fireplaces are provided they should wherever practicable be built into internal walls, with the chimney stacks carried above the ridge level of the house. In this way the heat in the flue is conserved and helps to maintain the temperature of the dwelling as a whole. Fireplaces should be of a type easily kept clean, e.g. with tiled interior or tiled slabs. Most domestic grates are more wasteful of fuel than they need be and we have learned with interest of the work being done on an experimental type of domestic grate which is more economical in fuel consumption and which creates much less dirt than the normal domestic grate.

[121]

CENTRAL HEATING Sufficient consideration has rarely been given to the possibility of providing central heating in domestic dwellings in Scotland. There are two possible methods of provision, firstly that by which the main source of heat is contained within the individual house, secondly that by which heating is supplied to a district from a central source.

* See reservation on this paragraph by Mrs Jean Mann (page 96).

SERVICING THE HOUSE: I

Plumbing and Design

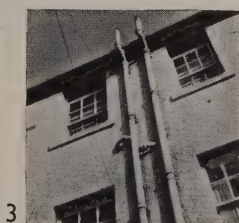


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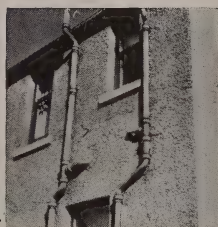


2

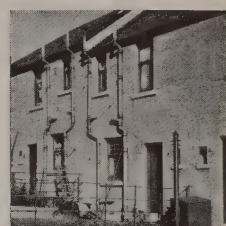
THE back and front views (1) and (2) above of the same terrace of houses in a famous early nineteenth-century Edinburgh Square show a surprising contrast, due mainly to the fact that the external piping seen in (1) did not form part of the original design; plumbing services were not installed until modern sanitation was introduced long after the houses were built. But even our most recently built houses and flats are disfigured by the practice of leading pipes on external walls and by the "two-pipe" system of plumbing (3, 4 and 5).



3



4



5

The back view of a block of modern flats (6) built in London in 1938 under the Housing Acts shows how the latest technique of leading pipes internally can make our buildings look well from any aspect.



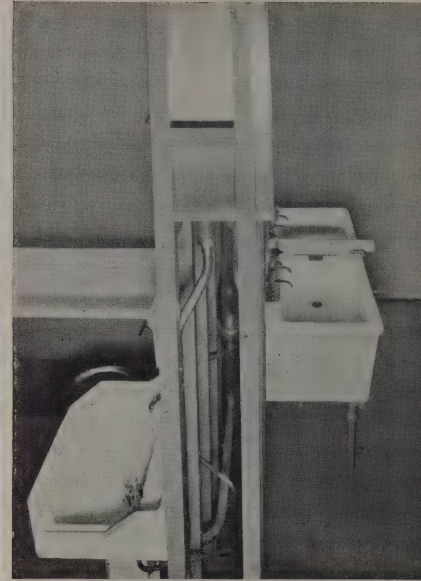
SERVICING THE HOUSE: II Plumbing—Modern Techniques



1



2



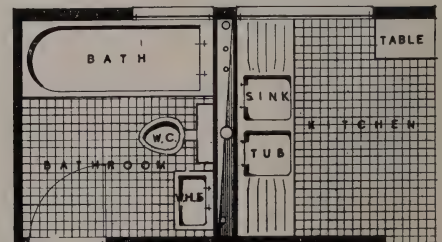
3



4

THE most modern system of plumbing carries all piping internally in a central duct. This method enables the whole plumbing unit—including the hot and cold water pipes and connections, drainage and waste water outlets, etc.—to be prefabricated with resultant economies in materials and cost and increased speed in manufacture and assembly. The prefabricated plumbing unit is usually located in the wall between the kitchen and bathroom (see plan).

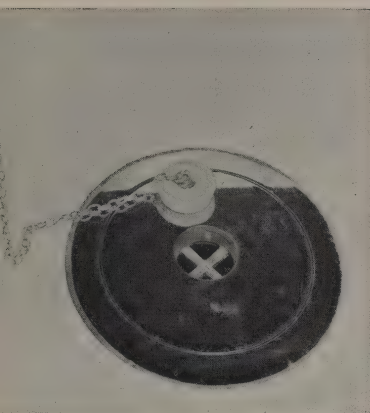
- (1) and (2) Prefabricated plumbing unit—bathroom side;
- (3) Prefabricated plumbing unit—view of duct and kitchen side;
- (4) and (5) Bathroom in house built recently by a Scottish Local Authority and fitted with one stack prefabricated plumbing unit. Note how the system improves appearance by eliminating exposed piping.



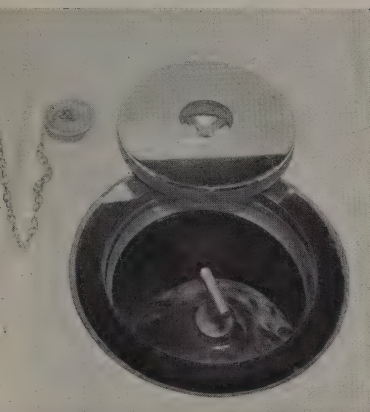
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SERVICING THE HOUSE: III

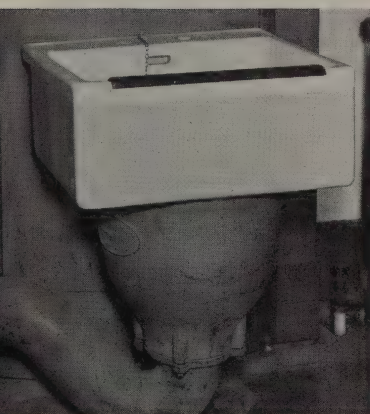
Refuse Disposal in Flats



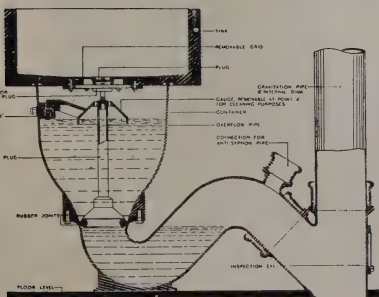
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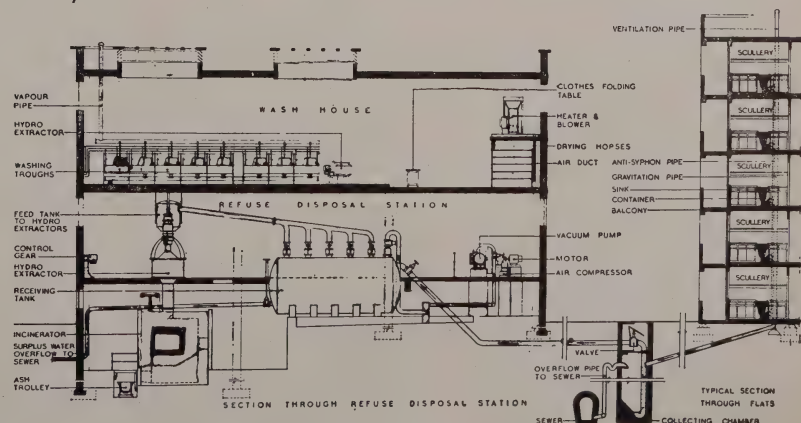
5



3

THIS modern system of refuse disposal installed in municipal flats at Leeds is hygienic and labour-saving. Refuse of all kinds can be washed down the kitchen sink (1) by simply removing the large plug which is separate from the small plug used for draining the sink in the ordinary way (2, 3); the refuse is then flushed into a container below the sink (4, 5) and carried away to a central incinerating chamber (plan 6).

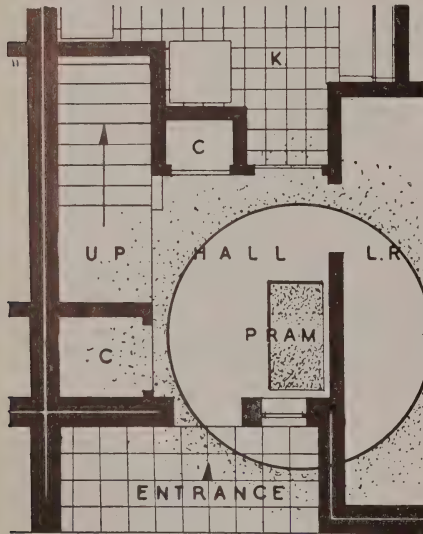
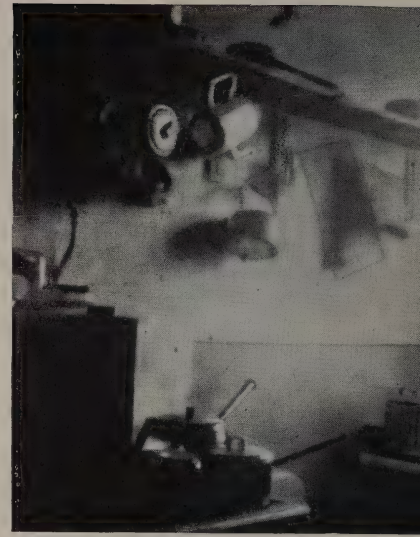
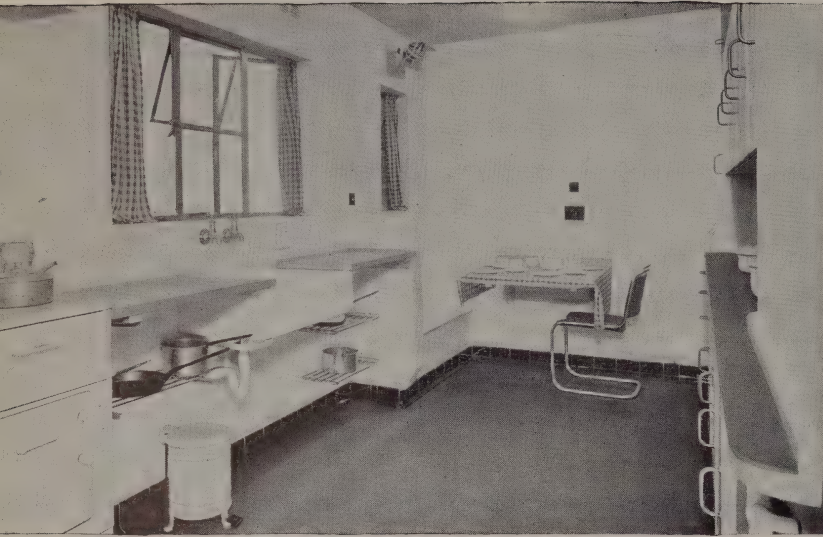
The heat generated by burning the refuse can be utilised, e.g. for a communal laundry.



6

SERVICING THE HOUSE: IV

Storage facilities



OUR pre-war houses, and particularly our pre-war kitchens, were often grossly deficient in storage facilities.

Contrast the untidiness of (2) with the neatness of the model kitchen (1)—designed by an English Local Authority for post-war municipal housing—with its pot racks, rounded skirting for easy cleaning, ample cupboards, properly fitted out dining annexe, etc.



PRAM space is essential in every family house and should always be included in the plan (3). If there is no room for the pram it is apt to be left in any odd corner which may be available (4).

Other things too need storage room—cycles, tools, etc. Out-buildings, if necessary for articles like these, should always be provided with the house, otherwise unsightly and badly designed huts and sheds may be put up to the detriment of the design of the houses and of their environment (5).



The former type of central heating has in the past normally been installed only in the most expensive types of house. We have received particulars, however, of the extent to which central heating from small low-cost stoves has been provided in the United States and elsewhere in low cost housing. In the most recent developments connected with the Defense Housing Program of the United States Government heating arrangements of this kind have been made available even in temporary demountable dwellings. Normally the heating of the whole house is done from a low-combustion solid fuel heater installed in the utility room either on the ground floor or, more commonly in America, in the basement of the house. This stove heats an air chamber located round the main flue and from this chamber the heated air is carried in ducts to each room in the house; grills are provided in each room through which the heated air percolates. This form of space heating is worthy of further research with a view to its possible application to housing in this country. American experience has shown that by bulk production of these heating units substantial economies in cost and in the use of fuel can be secured, and we are glad to learn that experimental work in this field is now going on in this country. If these experiments are successful the question of providing central heating in houses by individual systems of hot water circulation will not require further consideration. [122]

DISTRICT HEATING The principle of heating domestic dwellings from a central source seems to us to be capable of immediate application after the war to certain types of development. In this connection we have examined with great interest two schemes in Dundee where district heating has been made available. All the houses comprised in these schemes are provided with a hot water radiator in each apartment (except the kitchen) and the heat can in all cases be controlled at each radiator. The charges to the tenants amount to 3s. per week for a two-apartment house and 3s. 9d. for a three-apartment house, and these costs include also the cost of unlimited hot water supply. In the initial stages of the scheme the amounts payable by the tenants for these services, while covering fuel costs, costs of operation, maintenance, supervision, etc., did not take account of capital charges, which were charged against the housing account and were treated as eligible for grant under the Housing, etc. Act of 1919. We have also inspected similar schemes combining central heating and hot water supply in estates of modern flats in London where both services were provided at costs as low as 4s. per week for a five-apartment flat and involved a fuel consumption of only 2.5 tons of coal or coke, etc., per annum

per flat. These costs were inclusive of capital charges, costs of fuel consumed, and costs of operation and maintenance. When it is borne in mind that the average amount of expenditure on fuel in the average home in Scotland amounts to about 6s. per week, it seems obvious that substantial economies both in fuel and in cost to the tenant can be secured by schemes of the type to which we refer. [123]

ELECTRICITY AND GAS The use of gas and electric radiators for occasional heating has become very common in domestic dwellings in Scotland. Subject again to reasonable charges for electricity supply the electric radiator is almost universally preferred on the ground that if the gas fire is to be really effective it requires an independent flue. Where electricity is the normal lighting agent we accordingly recommend that ample facilities should be provided in every room in the house to enable electric radiators to be used. For this purpose electric power plugs should be installed in all rooms with the exception of the bathroom, but including the kitchen. In appropriate schemes the provision of built-in panel electric fires in bedrooms without coal fireplaces might be considered. [124]

Hot-Water Supply

In the past, hot water has normally been supplied from a boiler behind the living-room fire but we are advised that this method of supply often involves unnecessary consumption of fuel, unnecessary heat losses, and if the planning of the arrangement of rooms is not to be unduly restricted, uneconomical pipe runs. We understand that the whole question of the comparative efficiency and economy of various methods of heating water by solid fuel, gas, and electricity, including the most efficient methods of lagging the hot-water supply system to prevent heat losses, is being examined by the Heating and Ventilation Study Committee of the Post-war Building Directorate of the Ministry of Works. Pending this Committee's Report we content ourselves with recommending that all houses built after the war should be provided with an efficient and economical water heating system and that supplementary water heating facilities to ensure that hot water can be made available when required for occasional use should also be provided where appropriate. [125]

As an alternative to the combination of the living-room fire and back boiler many local authorities instal independent stoves in the kitchen which can be used for heating water, burning domestic refuse, and generally providing warmth in the kitchen and which are economical

when the independent boiler is of the slow combustion type which requires infrequent refuelling. The heat-storage solid fuel cookers, to which we have already referred, are also capable of being used to provide hot water and this possibility is being fully taken into account in the experiments which we have mentioned. [126]

Where district heating schemes are considered practicable they should in our opinion always be associated with schemes for providing hot water from a central source. It has been demonstrated at Dundee and elsewhere that such a supply is very much appreciated by tenants and that the cost of provision is accepted as an addition to the normal rent. Some authorities without experience of administering such schemes have suggested that facilities of this kind are likely to be abused and that there would require to be some limit to the amount of hot water which the individual tenant was entitled to use, the most predominant suggestion being that each house should be allotted a certain quota of hot water each day and that the supply should be automatically cut off when the quota had been exceeded. We have not found any evidence in the schemes which we have visited and in the details of other schemes which have been furnished to us that this apprehension has any basis in fact. [127]

Lighting

The use of electricity for lighting purposes has overwhelming advantages over any other form of power and the present practice of providing electricity for this purpose where the supply is available at reasonable cost should continue to be followed. In fact, even in areas where electricity is not immediately available but may be supplied within a reasonable time, houses should be tubed when built so that electricity may be made available in the house without further inconvenience and with the minimum of additional expenditure. [128]

Washing

We have visited a number of communal laundries provided in estates of flats in some English cities and we have found that these facilities are widely used. Such laundries as we have seen have been excellently equipped with power-driven washing machines, drying cabinets, ironing rooms, etc., and have been so designed that the housewife can do all the family washing, including the drying and ironing, within a space of about three hours. We are sure that in appropriate local circumstances in Scotland such communal laundries would be very much appreciated as integral features of flat development. [129]

But even where modern communal facilities are provided it is essential, in our opinion, that individual facilities for washing should also be provided in each house. The housewife is bound to feel that occasional laundry work should and must be done at home, especially where the household includes an infant or young children, and even where communal facilities are popular there will always be a proportion of housewives who will prefer to do all the washing in the house. [130]

We have already considered in general the provision that should be made for clothes washing in the home. We recommend that washing should not have to be done in the kitchen but that washing facilities should be provided in a separate utility room inside the house. In some areas we appreciate that traditional and local preferences may make it desirable to provide individual washing facilities for each house outside the house, *i.e.* in an outside washhouse. We deal in paragraphs 173-183 and 191-192 with the specific items of washing and drying equipment which we think should be provided. [131]

Refuse Disposal

The question of refuse disposal presents separate problems according to the type of development and according to the refuse-collection facilities available in different districts. [132]

HOUSES For houses of the cottage and flatted types in urban areas or in other areas where adequate refuse-collection facilities are available, there is no better arrangement than the provision of a standard type of bin. We have received evidence from many organizations suggesting that a standard bin should be prescribed by each local authority suitable to the collection arrangements in its area, and that these bins should be provided by the local authority. We recommend accordingly. [133]

For houses in rural areas or where refuse-collection facilities are inadequate or non-existent, the only satisfactory way of disposing of refuse is by burning. For this reason there are great advantages in providing in such areas the independent stoves which we have already commended in paragraph 126 and which would enable most domestic refuse to be used as fuel for the stove. [134]

FLATS Refuse disposal in flats, on the other hand, presents quite different problems—problems which in our opinion have received insufficient consideration in Scotland. We are familiar with, and we endorse, all the objections to the provision of refuse chutes into which

refuse can be emptied from each storey and subsequently collected from containers at the bottom of the chute. Refuse chutes of this kind have been installed in many schemes of flats which we have visited in England but we do not regard them as satisfactory. [135]

We agree, however, that some method of refuse disposal in flats which does not involve the carrying of refuse-bins by the housewife from the house to the ground floor for collection is essential. After a close examination of the data provided to us by the Corporation of Leeds and an inspection of the system of refuse disposal installed in the flats at Quarry Hill in Leeds, we have no hesitation in saying that this system of refuse disposal is more efficient and more satisfactory from every point of view than any other with which we are familiar. The system installed in the flats at Leeds is a modified form of the Garchey system of refuse disposal originally provided in Paris in 1932. [136]

The system as adapted in Leeds is simple and efficient in operation. The scullery sink is provided with a plug approximately 6 inches in diameter. This plug has a metal stopper in the centre which is the normal waste stopper so that the larger plug does not require to be removed for ordinary sink waste. The sink is fitted on to the top of a glass-lined cast-iron container which is, in turn, connected to a glass-lined cast-iron vertical gravitation pipe. Both the container and the pipe are kept perfectly clean by the scouring effect of the waste ashes deposited and flushed down with the waste water. The refuse, after passing into the container, is flushed into the gravitation pipe, through which it passes into a specially constructed air-tight chamber connected to the refuse-disposal plant by suction pipes. When the refuse reaches the refuse-disposal plant, the solid matter is mechanically separated by this plant and then burned in an incinerator. The heat generated in the incineration process may be used to provide central heating or, as is the case at Leeds, to provide hot water for a communal laundry. [137]

The advantages of this system from the point of view of domestic hygiene and convenience are obvious. The household refuse is not handled or exposed from the time when the housewife places it in the scullery sink until it emerges from the incinerator as ash or residue which is disposed of as fertiliser or utilised for other purposes. The system deals with all types of household refuse, including tins, bottles, ashes, vegetable matter, etc., and has worked most efficiently at the Quarry Hill flats in Leeds since it was installed in 1938. The actual cost of installation at Leeds amounted to £27 per flat for that part of the scheme comprising 938 flats so far constructed and the interest and

sinking fund charges on the initial cost of the installation, together with the running cost, involve a charge of 1·7 pence per week on the rent of each dwelling if account is taken of the normal rate contribution towards refuse collection. The system solves the difficulties of temporary refuse storage in flats and subsequent refuse collection and by its simplicity and efficiency in operation makes for a cleaner, tidier, and healthier home. We therefore recommend that in all future schemes for the erection of flats in Scotland the possibilities of incorporating a similar system of refuse disposal should be carefully considered. [138]

In schemes of flats where a system of this type cannot be incorporated, some arrangement should if possible be devised to obviate the need for carrying refuse-bins downstairs for collection, and further research into possible improvements in the chute system of disposal is essential to deal with this difficulty. [139]

General Storage Facilities

All our evidence makes reference, often in the strongest terms, to the absence of general storage facilities in houses provided in the inter-war years. By general storage facilities we mean storage space for prams, bicycles, garden tools, and other bulky items of domestic equipment which are essential for the efficient running of the ordinary family house but for the accommodation of which provision is so rarely made. In the absence of appropriate storage space, these items are apt to be left in odd corners of the house, thereby creating general untidiness and additional work for the housewife. Sometimes the tenant erects at his own expense a hut or shed in the back garden, almost invariably designed and constructed without regard either to the design of the particular house with which it is associated or to the amenities of the environment in general. We think that the provision of general storage facilities of this kind is essential and should be considered as an integral part of the house plan. The kind of provision required will, of course, vary for the different types of equipment to be stored. [140]

PRAM In our opinion every family dwelling should include space for the storage of a pram, preferably in the house if this can be conveniently arranged, for example in a recess under the stair in a two-storey cottage or within the front porch, and the dimensions of these parts of the house should be designed with this requirement in mind. Alternatively the accommodation must be provided outside the house. [141]

BICYCLES, TOOLS, ETC. Accommodation should always be provided, preferably in outbuildings, where it is required, especially

in rural areas. This accommodation in such areas should be on a scale sufficient for a motor-cycle and it should include reasonable provision for the wide variety of tools and other equipment which the rural worker may be expected to accumulate. Such outbuilding accommodation might in appropriate areas be equipped with a work-bench and shelves. [142]

Fuel Storage

IN HOUSES The inconvenience to the housewife of coal being delivered in the house itself is most strongly emphasised in our evidence, and the housewife resents especially the inclusion of the coal storage space in the kitchen. The delivery of coal into the kitchen when cooking or washing is being done represents an almost intolerable disturbance to the housewife in her work. We therefore recommend that for cottages and houses on the ground floors of flatted blocks the fuel store should be so located and designed that the actual delivery of the coal can be made from the outside for collection by the tenant from within the house; if this is not practicable the fuel store should normally be located either in the house structure, with its entrance outside the house (e.g. off a porch), or in a separate outbuilding. In the latter case a covered way from the house to the fuel store would be much appreciated, especially in rural areas. In houses on the upper floors of flatted blocks it is impracticable to adopt the first method which we have suggested and it is undesirable that coal should require to be collected by the tenant from an outbuilding. We recommend, therefore, that in this type of house the coal store should be in a lobby or passage cut off from the rest of the house and as near the top of the staircase as practicable. [143]

IN FLATS The problem of the delivery and storage of coal in flats is even more difficult to solve. Normally coal in flats is stored either in the kitchen or in the lobby. We do not regard even the latter arrangement as completely satisfactory and we think that the possibility of providing an arrangement whereby the coal can be delivered from the staircase and collected by the housewife from within the house should be considered. This method has been adopted in some schemes which we have visited and has worked successfully. [144]

In houses of all types the fuel store should be capable of accommodating not less than 10 cwt. The working-class housewife is just as entitled as anyone else to the greater convenience and economies to be secured by the purchase of coal in larger quantities. We deal with the dimensions and planning of the fuel store in paragraphs 205-207. [145]

Food Storage

The question of the amount and location of food storage space in the house is one which principally affects the equipment and layout of the kitchen. In rural areas, however, the amount of food to be stored may be substantial. Many rural workers grow on their own ground sufficient of the basic crops to supply the family with vegetables and fruit throughout the year. We therefore consider that all rural houses should be so planned that additional accommodation for food storage can be made available if necessary in outbuildings. [146]

Mechanical Installations

*** LIFTS IN FLATS** We have already recommended that all blocks of flats of more than three storeys in height should be provided with lifts. So far as we are aware, lifts have never been installed in any scheme of flats erected by local authorities in Scotland and have been provided only to a limited extent in similar schemes in England. The flats at Quarry Hill in Leeds are the only working-class flats in this country so far as we know which are provided with lifts throughout. These flats, which are of from five to eight storeys in height, contain 938 houses served by 88 lifts, one to each staircase unit. The lifts are automatically operated, are capable of carrying a load of 4 cwt., and were installed at a cost of £25 to £36 per flat. They are designed to accommodate two persons or to carry goods up to the weight specified. It was feared when the installation of lifts in this scheme was first proposed that the lifts would be widely abused and would be gravely dangerous to children. These fears have been groundless; the lifts have been in operation now for five years without causing mishap or injury. Care has been taken to instal the button calling the lift on each staircase at a height sufficient to make it difficult for children to operate the lift, but in fact the lift is now accepted as such a normal feature of the flats that the children have ceased to take a mischievous interest in it. [147]

Equipping the Home

The following fittings and items of equipment should be provided as "standard" in the various apartments of the house. The items which we recommend as "standard" fittings should all be standardised and mass produced. For this purpose, precise and specific proposals are preferable to recommendations in vague and general terms. We therefore specify exact sizes

* See reservation on this paragraph by Mrs Jean Mann (page 96).

and measurements for the equipment which we recommend as essential. We also incorporate in the report sketches illustrating these fittings; estimates of costs on the basis of bulk production are given in the Appendix to this chapter. Our recommendations deal, firstly, with equipment for houses designed to accommodate 4 to 6 persons. [148]

Kitchen-Utility Room

(a) Kitchen

Sink, with taps, and shelf below the sink for pail, basin, etc.

2 draining boards—one on either side of sink

Towel rails

Cooker

Pot racks

Larder

Work-table cabinet } Kitchen

China store } storage

Dry groceries store } fittings

Brooms and cleaning materials store *

(b) Utility Room

2 tubs

Draining or work board

Wringer fitment

Copper (washboiler)

Ceiling pulley

Drying cabinet

Power point for iron

*Brooms and cleaning materials store (alternative position) [149]

The following items should, in appropriate circumstances, also be considered for incorporation in these apartments:

Kitchen

Refrigerator

Plate racks

Utility Room

Washing machine

Ironing board [150]

(a) KITCHEN

Sink The outside measurements of the fitment provided in local authority houses in Scotland are normally 24 inches by 20 inches by 10 inches (*i.e.* 8 inches deep, inside the sink) and we regard these dimensions as satisfactory. The height of the sink and draining board is, from the housewife's point of view, of great importance. The evidence submitted indicates that in the majority of houses the height of the sink, which has usually been 30 inches or 33 inches, is too low. The heights proposed in the evidence submitted to us vary from 33 to 39 inches, the main suggestion being that it is preferable for the sink to be a little too high rather than too low. To enable the woman of average height to work at the sink without discomfort, the bottom

of the sink requires to be about 28 inches above floor level, and thus the rim of an 8-inch deep sink (inside measurement) requires to be 36 inches above floor level. We recommend that all sinks should be fitted at this height. We also recommend that the sink should have an extended shelf with soap sinkings (efficiently drained), a tiled or other impervious finish along the back of the sink, and, where the sink is under a window, a tiled window ledge clear of the sink and taps. The provision of a fixed glazed panel, 6-8 inches deep, above the window-sill is recommended to prevent articles falling out when the window is open. [151]

Taps should be of a finish which does not require polishing and the outlets should be high enough to allow a pail to be filled conveniently, *i.e.* the outlet of the tap should be 13-14 inches above the bottom of the sink. [152]

Under the sink an open *gridded shelf of metal bars* should be provided on which a pail or basin may stand. This shelf should be fixed 7 inches above floor level; the 7 inches between the shelf and the floor will allow for sweeping. [153]

Draining Boards A draining board of smooth, hard material, 27 inches long and of the same width as the sink, should be provided on each side of the sink (see also under "pot racks" paragraphs 157-158). [154]

Towel Rails in the kitchen for both hand and dish towels are recommended as "standard" fittings. [155]

Cooker It appears to us that the majority of householders prefer to use either a gas or an electric cooker and the necessary gas or power point should be provided. The tenant should, we think, be allowed some choice in the size and type of cooker to be installed. In these matters expert advice should be made available and demonstrations of the working of the various types of cookers, including trial by housewives, should be encouraged by local authorities. The low oven of the cooker normally provided necessitates much stooping and we suggest that consideration should be given to the use of the horizontal type of cooker, that is with the oven and the hot-plate side by side on a table or stand and with the top of the hot-plate 34 inches above floor level (*i.e.* in line with the work-table surface—see paragraph 164). With the oven raised in this way no stooping is required. We appreciate that this type of cooker occupies approximately twice the floor space required for the upright type of cooker and that it may not therefore be suitable for the smaller kitchen. All cooking stoves should, if possible, be provided with thermostatic control, an easily cleaned surface which requires no polishing, a door on the oven hinged at the bottom to act as a shelf,

and the oven well placed for both natural and artificial lighting and out of draughts. [156]

Pot Racks In the open space under the stand for the horizontal type of cooker metal-rod racks should be fitted to the legs of the stand for the storage of cooking pots, etc.—one rack 7 inches and another 19 inches above floor level to give a height of 12 inches between the lower rack and the upper rack and 8 inches between the upper rack and the under side of the stand. These two racks would accommodate the various sizes and shapes of pots, etc., normally found in an average household. The 7 inches space between the lower rack and the floor allows for sweeping. [157]

Where a solid-fuel cooker is used, or where a one-piece cooker with the hot-plate on the top of the oven is installed, pot racks should be fitted under the draining boards at the sink. [158]

Kitchen Storage Fitments

Kitchen cupboards in daily use should be of simple design, have a washable surface and be not more than 6 feet 6 inches in height in order that articles on the top shelf may be within reach of a woman of normal height. Any cupboards which project beyond the wall face should be continued to the ceiling and the space above the height of 6 feet 6 inches shelved for use as reserve storage space. A space of half to one inch between the back of the cupboard and the back of the shelves facilitates cleaning (this space to be additional to the depths proposed for shelves). A toe recess, 3 inches high and 2 inches deep, should be provided at the base of all kitchen fittings to protect them from damage at floor level. It has been suggested that a base for kitchen fittings could be provided in kitchens which have solid floors, in the form of a raised platform of concrete, 3 inches high, and coved at the front—a coved recess does not harbour dirt so readily and is more easily cleaned. The possibility of fitting sliding or shutter doors to storage fitments should not be overlooked. [159]

Larder A larder has normally been provided in houses built since the last war but the space inside the larder has not always been planned to advantage, frequently only two or three narrow shelves being installed. In a larder in

an urban house floor space is unnecessary as the housewife shops frequently and does not normally require space for containers for large stocks of food, but ample shelf space should be allowed for large dishes on which to keep food. Unnecessary floor space in the larder may become a gathering place for odds and ends which hinder regular cleaning. A larder for an urban household of 4 to 6 persons should, we think, be 6 feet 6 inches high, 2 feet 6 inches wide and 1 foot 6 inches deep. Advantage should be taken of any space between the top of the larder and the ceiling to provide reserve storage space. [160]

Details of the suggested arrangement for six shelves including accommodation for vegetables are given in Note I (below). It will be seen that we propose that one of the shelves should be slatted and this suggestion is based on the fact that bread stored in an airy space and covered with a cloth keeps for a longer period than when stored in bins. The larder should be placed in a convenient position with ventilation to the outside. For the upper portion of the larder we suggest a gauze-covered window, so arranged as to give direct ventilation to the three upper shelves, and for the lower portion, where vegetables may be stored, air bricks or some other suitable type of ventilation. [161]

Where it is found more convenient to provide the larder as part of the structure of the house shelving should be provided on the scale proposed in Note I (below). [162]

Work-table and kitchen utensils cabinet; china and dry groceries stores We have considered in some detail the accommodation required for kitchen utensils, china, and dry groceries in a household of 4 to 6 persons, and we think that this accommodation could take the form of three separate units, *i.e.* a cabinet as work-table and store for kitchen utensils, a china store, and a dry groceries store, of which details are shown in Note II (opposite). These units would lend themselves to various arrangements and the number of units could be reduced or increased for smaller or larger houses according to the size of the household. [163]

It will be seen from the details in Note II that the top of the lower portion of each of these

NOTE I: SUGGESTED ARRANGEMENT FOR LARDER WITH SIX SHELVES (Paragraph 161)

Height, 6 ft. 6 in.; width, 2 ft. 6 in.; depth of shelves, 9 in. to 18 in.

- | | |
|--|---|
| (i) Shelf 9 in deep and 12 in. from top of larder . | } A space of 1 in. (in addition to the depth of the shelves) should be left between the back of the shelves and the wall and between the front of the shelves and the door to permit free circulation of air. |
| (ii) " 18 in. " " 12 in. from shelf above . | |
| (iii) " 18 in. " " 15 in. " " " " . | |
| (slate or tiles, etc.) | |
| (iv) Shelf (slatted) 12 in. deep and 9 in. from shelf above | |
| (v) Strong mesh or perforated metal tray for vegetables, etc.—18 in. deep and 10 in. from shelf above. | |
| (vi) Strong mesh or perforated metal tray for vegetables, etc.—18 in. deep and 12 in. from tray above. | |
- [This lower metal tray will rest on the base of the fitment.]
Toe recess 3 in. high; 2 in. deep.

three fittings is 34 inches above floor level, so forming a continuous work-top. We have recommended in paragraph 156 that the top of the hot-plate of the cooker should also be at a height of 34 inches. It is often suggested that all working surfaces in the kitchen should be at a uniform height, *i.e.* sink, draining board, cooker, work-table, lower portions of cupboards, etc., and that all cupboards should be of a uniform depth. The adoption of this suggestion would, no doubt, give a pleasing appearance to the kitchen. In our opinion, however, the comfort and convenience of the housewife are more important considerations and the height which we have recommended for the sink, *viz.* 36 inches (paragraph 151) is not an appropriate work-table height for the majority of women. Similarly it is unsatisfactory to have all cupboards of uniform depth irrespective of the use to be made of them. Unnecessarily deep cupboards are often as inconvenient to the housewife as unnecessarily shallow ones. We have, therefore, recommended dimensions for the various cupboard fittings intended to make them fulfil efficiently the purposes for which they are designed. [164]

These three fittings can be grouped in a variety of ways to suit the planning requirements of particular kitchens, *e.g.* the three units might be grouped together giving an overall width of 7 feet or the smaller units might be located separately from the larger work-table unit, etc. [165]

It may be possible or desirable in place of any or all of these units to incorporate the necessary shelving in the fabric of the building. Where this is done the shelving provided should be on the scale indicated in Note II, the shelves enclosed and a work-table provided, *e.g.* a table hinged to the wall. [166]

Cupboard Service Hatch. In some houses it may be possible to plan the unit for china as part of the wall between the kitchen and dining space (or living-room if meals are taken there), thus giving access to the shelves (or to upper shelves only) from both apartments and forming a service hatch between the two rooms. In such circumstances doors should be provided on both sides of the shelves. Access to reserve storage space above these shelves should be from the kitchen side only. [167]

NOTE II : SUGGESTED ARRANGEMENT FOR KITCHEN STORAGE UNITS WITH SHELVES AND DRAWERS (Paragraphs 162-4)

	<i>Work-table Cabinet</i>	<i>China Store</i>	<i>Dry Groceries Store</i>
Height	6 ft. 6 in.	6 ft. 6 in.	6 ft. 6 in.
Width	3 ft. 0 in.	2 ft. 0 in.	2 ft. 0 in.
Depth of Shelves: Upper portion	up to 7 in.	up to 7 in.	up to 7 in.
„ „ Lower portion	„ 23 in.	„ 12 in.	„ 12 in.

[In addition to the depth of the shelves, a space of half an inch should be left between the back of the shelves and the back of the cupboard to facilitate cleaning.]

Each fitment.

- Upper Portion of Cabinet { (i) Shelf 7 in. deep and 7 in. from 6 ft. 6 in. level.
(ii) Shelf 5 in. deep and 5 in. from shelf above.
(iii) Shelf 7 in. deep and 9 in. from shelf above.
(iv) Batten below shelf (iii) for hooks for kitchen equipment.

- Upper Portion { (i) Shelf 7 in. deep and 8 in. from 6 ft. 6 in. level.
(ii) Shelf 7 in. deep and 5 in. from shelf above.
(iii) Shelf 5 in. deep and 5 in. from shelf above.
(iv) Shelf 7 in. deep and 8 in. from shelf above.

Work-table formed by top of lower portion of cabinet; approximately 3 ft. by 23 in. and 34 in. above floor level.

Top of lower portion of each fitment, each approximately 2 ft. by 14 in. and 34 in. above floor level.

Drawers : One row of 2 drawers, 4 in deep (inside).

Drawer : One drawer, 4 in deep (inside).

- Lower Portion of Cabinet { (iv) Shelf 18 in. deep and 10 in. below the drawers.
(v) Base of fitment forming a shelf 12 in. below shelf above.
Toe recess 3 in. high; 2 in. deep.

- Lower Portion { (v) Shelf 10 in. deep and 10 in. below the drawers.
(vi) Base of fitment forming a shelf 12 in. below shelf above.
Toe recess 3 in. high; 2 in. deep.

Doors : On lower portion up to the drawers; on upper portion to enclose shelves but leaving clear space about 20 in. high between upper portion and work-table.

Doors : On lower portion up to drawer; on upper portion to enclose shelves but leaving clear space about 14 in. high between upper and lower portions.

In the future it may be possible to reduce the number of kitchen storage cabinets by making use of other fittings, *e.g.* dry groceries can be conveniently stored in small glass drawers which before the war were available in this country but were imported from abroad. These drawers were made in several sizes to hold small and large quantities of cereals, spice, etc., and the drawers could be grouped to form a most compact wall fixture. It may also be possible for such fixtures to be manufactured in transparent plastic and set in a coloured plastic framework to replace the upper part of the dry groceries store or the upper part of the work-table cabinet.

[168]

In a kitchen where the space under the draining boards is not required for pot-racks (see paragraph 157), a small cupboard with a drawer could be fitted under each draining board. With the provision of such cupboards and the addition of a work-table hinged to the wall of the kitchen, it might be possible to dispense with one of the storage units.

[169]

Brooms and Cleaning Materials Cupboard (in utility room or in kitchen) (a) Accommodation for brooms and cleaning materials should be provided in every house; without such accommodation these articles are usually kept in odd corners. For this store we recommend the provision of a cupboard, 18 inches deep, with shelves and suitable hooks or holders to accommodate brushes (long and short handled), a mop, cleaning equipment, etc., and also a carpet sweeper and/or vacuum cleaner. In Note III (below) we suggest a specification for this cupboard.

[170]

(b) In some cases it may be more convenient for this store to take the form of a shallow cupboard built into a wall, *i.e.* by the provision of shelves, brush holders, hooks, and doors, and this we think could be arranged as proposed in Note IV (opposite).

[171]

(c) Another alternative would be to utilise the space between two fittings or cupboards (or across a corner) as a cleaning cupboard by fitting shelves, brush holders, hooks, and doors.

[172]

(b) UTILITY ROOM (CLOTHES WASHING FACILITIES)

The cheaper services offered by the commercial laundries prior to the war—*e.g.* bag-wash and semi-finish services—were becoming very popular as a means of relieving the housewife of the washing of heavy articles such as sheets, bedding, and heavy clothing. While we think that communal washing and ironing facilities, as provided in some of the larger schemes in both Scotland and England, should be provided where the local authority are of the opinion that they will be used, we appreciate that many women do not wish to use such communal facilities and others find it inconvenient to leave the home to go to the communal laundry at stipulated times.

[173]

In addition to such commercial laundry and communal laundry or communal drying facilities as may be provided, we think that every working-class home should have the necessary equipment to enable the housewife to undertake as much of the family washing as she wishes. This is most important where the household includes an infant or young children as washing in such cases cannot be confined to any particular day.

[174]

The facilities required for this work are: two tubs; draining or work board; wringer; copper or washing machine; ceiling pulley; heated and ventilated drying cabinet; ironing board; power point for iron; and accommodation for a laundry basket, clothes lines, and clothes pegs. Where a utility room is provided all the laundry equipment should be in that room.

[175]

(a) *Two tubs and draining board* Tubs should be fitted with the rim 36 inches above floor level and have an impervious draining board at one side; the board should be at least 27 inches long, of the same width as the tubs and sloping slightly towards the tub. The tub supplied by local authorities in Scotland (24 inches by 20 inches by 15 inches deep), appears to be satisfactory but we suggest that an overflow, similar to those in sinks, should be provided in tubs. To store the wringer when not in use, a slatted shelf, raised about 7 inches from the floor, should be provided under the draining board.

[176]

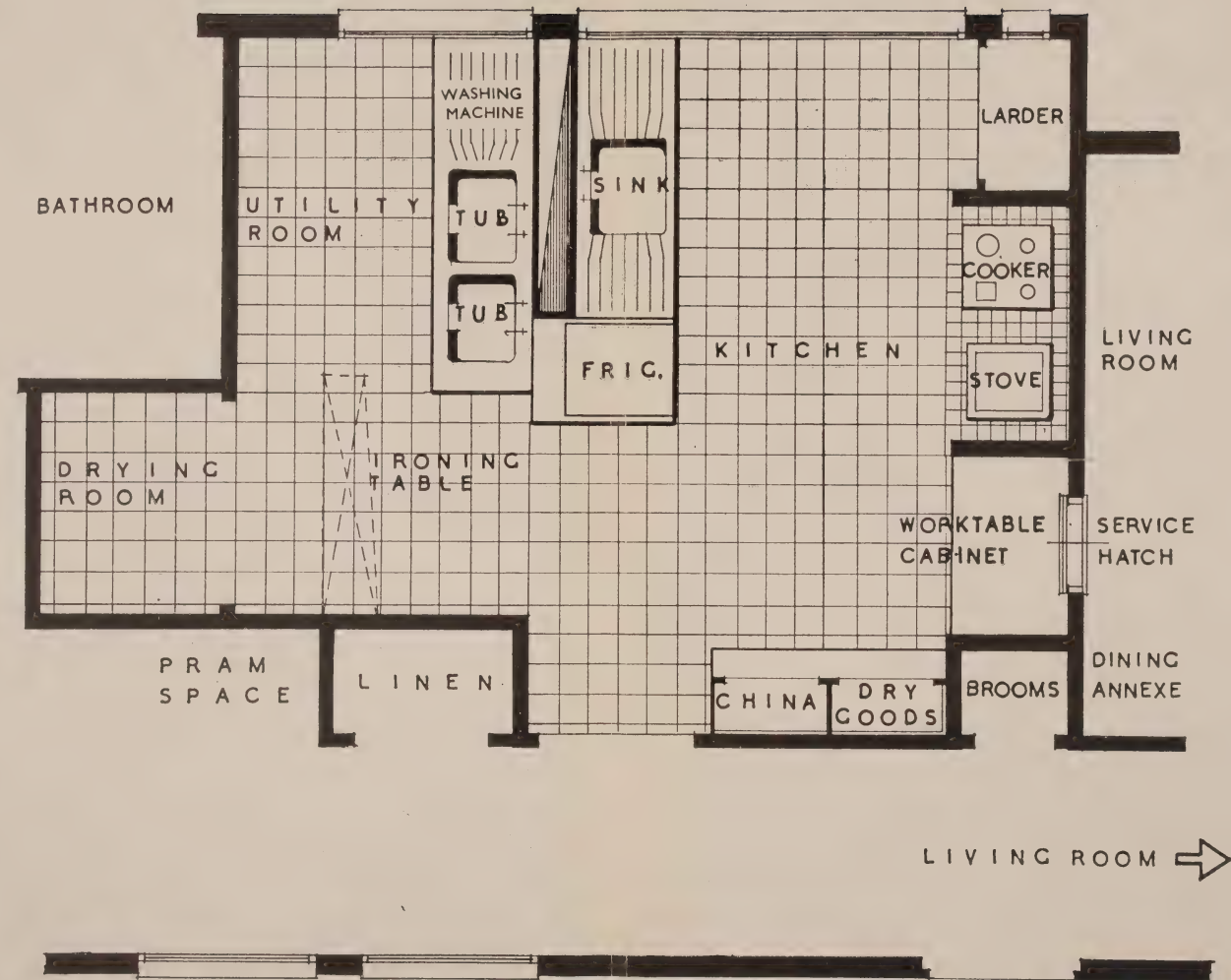
NOTE III: SUGGESTED ARRANGEMENT FOR CUPBOARD FOR BROOMS AND CLEANING MATERIALS (Paragraph 170)

Height, 6 ft. 6 in.; width, 1 ft. 6 in.; depth, 1 ft. 6 in. (inside measurement)

- | | |
|---|---|
| (i) Shelf 5 in. deep and 6 in. below top of cupboard | } $\frac{1}{2}$ in. space between the back of the shelves and the back of the cupboard. |
| (ii) Shelf 12 in. deep and 12 in. below shelf above | |
| (iii) Several hooks on underside of lower shelf for small brushes, aprons, etc. | |
| (iv) At the back of the cupboard, about 6 in. below the lower shelf, there should be fitted a holder for a mop. | |
| (v) On each side of the cupboard, about 9 in. below the lower shelf, a holder for a long-handled sweeping brush should be provided. | |
| Ventilation by means of louvres or other form of air inlet in the door. | |
| Toe recess 3 in. high; 2 in. deep. | |

THE WORKING UNIT—

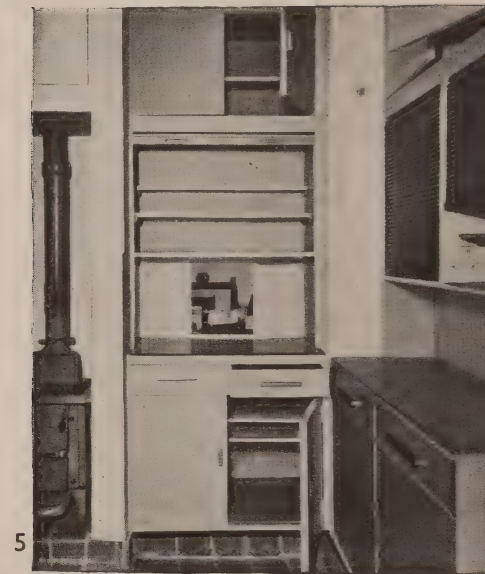
4. Larder for urban house properly ventilated to outside wall and fitted with a cold shelf and slatted shelves below for vegetables, etc.
5. Kitchen storage units fitted with shutter doors and forming work-table and service hatch.
6. Unit for china and dry groceries, fitted with glass doors and shelves.



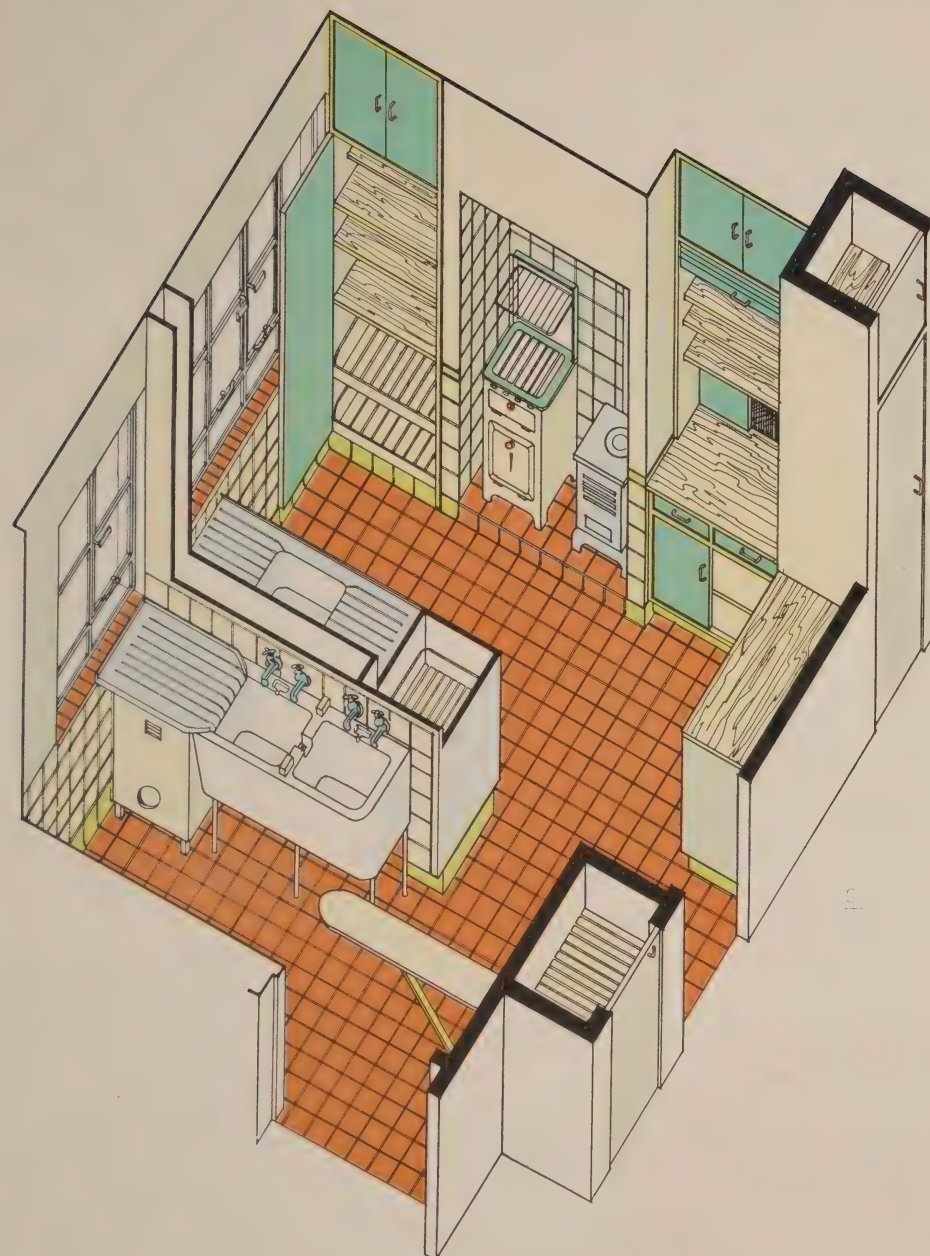
1. Refrigerator and other storage units including reserve storage space above.
2. Linen cupboard with slatted shelves and air inlets in doors (for ventilation).
3. Fitted ironing board and washing machine.

The fittings illustrated in photographs 1, 2, 4 and 5 are designed to the specifications contained in the Report.

—IN PLAN



THE WORKING UNIT—

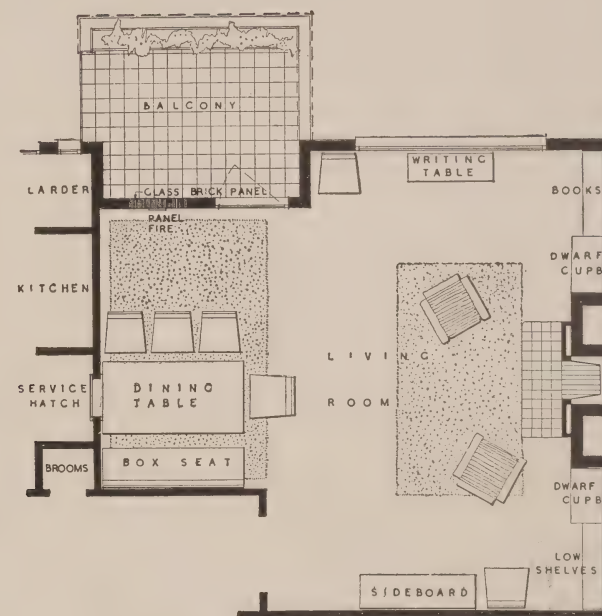


—IN PERSPECTIVE

THE LIVING UNIT



1. Living-room with dining annexe showing panel fire, service hatch from kitchen, door opening on to balcony. (See plan.)



2. Living-room furnished with utility furniture, and fitted with built-in dwarf cupboards beside fireplace.



4. Full-length cupboard fitted with glazed doors on the upper portion of cupboard.

5. Full-length cupboard fitted with full-length flush door.

3. Dwarf cupboards—alternative type.



(b) *A wringer fitment* should be provided and placed in a position to allow the wringer to be fed with the left hand and turned with the right hand. [177]

(c) *Copper (Washboiler)—Washing Machine* The washing of clothes and other articles is one of the important tasks in a household and for the housewife who undertakes the bulk of this washing at home involves an appreciable amount of heavy labour. It is most desirable, therefore, to provide equipment which will reduce the labour associated with clothes washing, and we consider that a copper or washing machine is essential in every home. The representations which have been made to us are strongly in favour of the standard provision of a washing machine. We appreciate, however, that washing machines may not be available in large numbers in the immediate post-war period, and we recommend, therefore, that an electric or gas copper or washboiler should be installed in that case. The copper should, of course, be placed close to the tub. Where gas or electricity is not available, it will be necessary to instal a solid-fuel copper. The necessity for a flue has in some cases resulted in the solid-fuel copper being placed at a distance from the tub and we suggest that every effort should be made to place such a copper in close proximity to the tub in order that the housewife does not require to lift heavy loads of hot water and wet articles across the room, a process which is not only unnecessarily tiring but is dangerous, particularly where young children may be moving about. [178]

Wherever possible plumbing arrangements should be such that the housewife does not require to fill or empty a copper or washing machine by hand. [179]

(d) *Drying Cabinet and Ceiling Pulley* (i) The full benefit of good washing facilities cannot be obtained without adequate drying arrangements. To have clothes dried out of doors in sunshine and fresh air is, without doubt, the most desirable arrangement, and we recommend that every household should have the use of a drying-green and strong posts for clothes lines. In Scotland, however, weather conditions so frequently make outdoor drying of clothes impossible that good indoor drying accommodation should be provided for every household. While some would like to dispense with ceiling

pulleys, the evidence submitted to us shows that both ceiling pulleys and heated drying cupboards are desired. We recommend, therefore, that a ceiling pulley of not less than four spars should be provided and arranged in such a way that hanging clothes do not come in contact with the person working at the tub. [180]

(ii) The most appropriate method of providing heated accommodation in individual houses for the drying of clothes requires careful consideration and is a suitable field for experiment. Specially designed drying cabinets heated by gas or electricity were available before the war, but if a cupboard of a suitable size were provided as an integral part of the structure of the house the cost of providing means of heating and ventilating the cupboard would not be high. For a family house we suggest the provision of a drying cupboard with an impervious floor, as part of the structure of the house, having minimum dimensions of 6 feet 6 inches high, 4 feet wide, and approximately 2 feet deep, with rust-proof rods as proposed in Note V (overleaf). Pipes from the domestic hot-water system and air inlets in the doors of the cupboard would no doubt provide sufficient heat and ventilation to dry small articles, to air linen and to dry outdoor coats. On the other hand the drying of heavy wet articles in cabinets of this kind presents special problems and requires much more efficient heating and ventilation facilities. We think that further investigation might be made into the possibility of devising an economical and efficient heating unit for installation in drying cupboards for this purpose. Tubular electric heaters, which were produced cheaply before the war and were economical in fuel consumption, and enclosed gas heaters have been utilised in drying cupboards designed for the drying of light articles. In this connection we have been advised that a tubular electric heater, 3 feet long with a loading of 160 watts per foot, would consume only one-half unit of current per hour and would not be damaged by water dripping from clothes. In a drying cupboard ventilation could be provided by means of louvres or some other form of air inlet at the top and the bottom of the doors. Where the cupboard is on an external wall the provision of a window would be an advantage. [181]

(e) A few *hooks* on a batten in the utility room

NOTE IV : SUGGESTED DIMENSIONS OF WALL CUPBOARD FOR BROOMS AND CLEANING

MATERIALS (Paragraph 171)

Height, 6 ft. 6 in.; width, 2 ft. 6 in.; depth, 12 in.

2 shelves arranged as shown in Note III.

2 holders, on back wall of cupboard for long-handled sweeping brushes, about 47 to 53 in. above the floor of the cupboard.

Hooks for small brushes, etc., on the underside of the lower shelf.

A holder for a mop, at one end of the cupboard, and at the other end hooks for aprons, etc.

Ventilation by means of louvres or other form of air inlet in the door.

would be most useful for hanging a clothes line, a bag of pegs, clothes basket, hand towel, etc.

[182]

(f) A *supply point* placed in a position convenient for using an *iron*, e.g. at a height of not less than 3 feet 6 inches above the floor level, should be provided whether or not a fitted ironing board is installed (see also paragraph 192).

[183]

Kitchen without a Utility Room

In the foregoing paragraphs we have been envisaging a kitchen with a separate utility room which would be used for clothes washing. Where there is no utility room the equipment detailed in these paragraphs will require to be concentrated in the kitchen. In such circumstances the provision of an efficient steam outlet from the copper is essential. The wringer fitment should project as little as possible above the draining board so as to minimise the danger of the breakage of dishes. Further, where washing facilities have to be provided in the kitchen, it may sometimes be more convenient to place the drying cabinet and the broom cupboard in the lobby near the kitchen door.

[184]

Miscellaneous Kitchen-Utility Room Equipment

In addition to the "standard" items of equipment recommended in the foregoing paragraphs, we consider that, in appropriate circumstances, the following items should be incorporated in the kitchen or utility room:

[185]

Refrigerator In the course of our enquiries we deemed it advisable to obtain medical evidence in regard to refrigerators, and we were informed that while low temperature does not destroy bacteria, refrigeration is one of the best methods of preserving, improving the digestibility, and maintaining the vitamin values of various foods. A refrigerator must be kept scrupulously clean, and "defrosted" and serviced regularly, the door opened as infrequently as possible and then closed properly. If the door is not properly closed the refrigerator cannot function and food is spoiled.

[186]

The provision of a refrigerator does not in our opinion warrant any appreciable reduction in larder accommodation, as refrigerators, being hermetically sealed, cannot be used for the

storage of food unless they are continuously in operation. We are also of the opinion that a very small refrigerator is of little use in a family house as the best results will not be obtained where food is closely packed in the refrigerator.

[187]

While we hope that the use of refrigerators will be encouraged and that by standardisation and mass production costs may be reduced sufficiently to allow all who want them to have refrigerators, we appreciate that refrigerators may not be available in large numbers immediately after the war. We therefore recommend that all kitchens should be planned to allow the introduction of a refrigerator of a size to meet the requirements of the household concerned, and with the necessary supply point in a convenient position.

[188]

Certain types of refrigerators which are water-cooled involve a special charge to the tenant by the water-rating authority of from 10s. 6d. to 21s. per annum, depending upon the quantity of water (between 7,000 and 14,000 gallons per annum) required for the operation of the refrigerator. We are informed, however, that the refrigerators marketed immediately before the war were of the air-cooled type only, for which a water supply is not necessary and consequently no special water charge is involved.

[189]

Plate racks are not in general use in Scotland but the evidence received indicates a desire for such a convenience. We suggest, therefore, that in a proportion of their houses local authorities should provide plate racks made of an easily cleaned material, e.g. plastic, etc. Plate racks would be most useful in houses intended for large families.

[190]

Washing Machine In paragraph 178 we have stated that a copper or washing machine is, in our opinion, essential and the evidence submitted to us is strongly in favour of the washing machine. Prior to the war, inexpensive types of washing machines were available in which the agitator and wringer were hand-operated. In order, however, to reduce the labour associated with clothes washing we hope that the use of power-driven washing machines will be encouraged and that in the near future various types, including those capable of boiling clothes, will be available at prices to suit every household. We appreciate, however, that washing machines may not be available in large numbers in the

NOTE V : SUGGESTED ARRANGEMENT FOR FITTINGS IN DRYING CABINET (Paragraph 181)

- 4 rust-proof rods fitted about 6 in. from top of cabinet and each approximately 6 in. apart
- 5 rust-proof rods fitted about 4 ft. above floor level and each approximately 4 in. apart
- A few hooks at each end of the cabinet

Strong rods will be necessary to carry heavy, wet articles.

immediate post-war period, and in these circumstances we recommend that all houses should be planned to allow space for the introduction of a washing machine, preferably in the utility room. Until a washing machine is installed this space might be occupied by the copper. A supply point for use with a washing machine should be placed in a convenient position. The plumbing arrangements should be such that the washing machine does not require to be filled or emptied by hand. [191]

Ironing Board. We suggest that, as in the case of plate-drying racks, local authorities should provide in a proportion of their houses a fitted ironing board in conjunction with the drying cupboard. The ironing board should be well placed for both natural and artificial lighting and be near the power point for the iron. If experience shows that the tenants appreciate and use this convenience, local authorities might instal ironing boards in a larger proportion of the new houses which they build. [192]

Living-rooms

We consider that it is desirable to provide in living-rooms shelves for books and china; drawers for cutlery and small articles; and cupboard space for toys, games, wireless, knitting and sewing materials, etc. [193]

(a) *Full-length Cupboards* We set out in Note VI (below) measurements of units to form full-length cupboards (6 feet 6 inches high) which in our opinion would be suitable for living-room use. Fittings of this type could be erected in various ways for example, with a drawer; without a drawer; by introducing various types of doors, etc. Possible arrangements are suggested in an Appendix to this chapter. [194]

(b) *Dwarf Cupboards* As an alternative to tall cupboards, it may, in certain cases, be sufficient or desirable to provide only low or

dwarf cupboards. For such cupboards we suggest dimensions as detailed in Note VII (overleaf). [195]

It will be seen that for both full-length and dwarf cupboards we have proposed only two widths, 2 feet 6 inches and 1 foot 6 inches, but these fittings could, of course, be manufactured in various widths, say from 15 inches to 36 inches. The height of 34 inches suggested for the lower portion of the full-length cupboards and for the dwarf cupboards (see Notes VI and VII) is the same as the kitchen work-top height which we have already recommended. Any of these fittings could therefore be used as part of, or in conjunction with, a *service-hatch* through to the kitchen. They would also form very useful cupboards in a dining annexe. The dwarf cupboards could be used as single units or several units could be used together with the top serving as wireless, etc., table or bookshelf. [196]

(c) *"Through-and-through" Cupboards* Another possible arrangement in the living-room is the "through-and-through" china cupboard and service-hatch, planned as part of the dividing wall between the kitchen and the living-room. Where this type of cupboard is used another shelved fitting should be provided in addition. [197]

(d) *Recesses at Fireplaces* Useful cupboards, either full-length or half-length, could be formed in recesses at the sides of fireplaces by fitting shelves into the recesses and providing doors of suitable widths. [198]

Window Seats We recommend the provision, where practicable, of a box window seat for children's toys, etc. [199]

Bedrooms

In the majority of houses built by local authorities in the inter-war years a hanging

NOTE VI: SUGGESTED DIMENSIONS FOR UNITS TO FORM FULL-LENGTH CUPBOARDS

(6 ft. 6 in. HIGH) FOR A LIVING-ROOM (Paragraph 194)

	Upper unit	Lower unit without drawer, OR	Lower unit with drawer.
Height	3 ft. 8 in.	2 ft. 10 in.	2 ft. 10 in.
Width	2 ft. 6 in.	2 ft. 6 in.	2 ft. 6 in.
Number of shelves	3	2	2
Depth of shelves (inside measurement)	8 in.	12 in.	12 in.
Distance between shelves (vertically)	9 in.	10 in.	8 in.
Distance between base of cupboard and lowest shelf	14 in.	12 in.	10 in.
Drawer	—	—	One row of drawers, 4 in. deep — inside measurement.

press was provided in at least two of the bedrooms but we have found that there is an almost unanimous demand for more and better-fitted built-in wardrobe accommodation in bedrooms. We recommend, therefore, that in all houses of three bedrooms and less a reasonably deep built-in hanging cupboard or wardrobe should be provided in each bedroom. In houses of more than three bedrooms, a full-length hanging cupboard might be dispensed with in one of the bedrooms, in which case a built-in cupboard of another type—for example, a dwarf cupboard 34 inches high, as described in Note VII (below), with shelves and drawers for shoes and small articles—should be provided. Cupboards in bedrooms should be free from damp and should, therefore, be built in internal walls and, where possible, between adjoining bedrooms. In Note VIII (opposite) we suggest dimensions for the full-length hanging cupboards or wardrobes. [200]

Bathroom-W.C. Apartment

We recommend the provision in the bathroom of a heated towel rail where practicable. If no heated or other towel rail is provided, adequate belting should be supplied to which the tenant may affix rails. Other desirable items of equipment are small hooks for face-cloths (or narrow belting for hooks); a cabinet for toilet articles, with mirror-door and shelves 3 or 4 inches deep; a small shelf of non-absorbent material (if no shelf as part of basin); accommodation for soap, tooth and nail brushes, tumblers, etc. The provision of these small conveniences would encourage children to acquire good habits from an early age. In bathroom and w.c. apartments, at least the lower part of the windows should be opaque. Where the walls of the bathroom and w.c. apartments have a tiled or similar wall finish

it is important that towel rails, hooks and toilet-paper holders, or suitable beltings, should be provided to avoid damage by the tenant installing such fittings himself. [201]

Linen Cupboard

A linen cupboard is, we think, a necessity in every house, but the accommodation required varies with the size and circumstances of the household. For the storage of linen, etc., in the average family household we recommend the provision of a full-length cupboard, 3 feet wide and at least 18 inches deep, with five slatted shelves not less than 15 inches deep and arranged to leave a space of 1–2 inches between the front of the shelves and the door and a space of 1 inch between the back of the shelves and the back of the cupboard for circulation of air. The base of the cupboard should, if practicable, be raised to the height of the skirting board. This cupboard should be dry, but, as it is intended for use as a store and not merely as an airing cupboard, we think that it should not be heated. We understand that over a long period heat tends to discolour the fabric and weaken the threads of the materials stored. Some ventilation in this cupboard is desirable. [202]

The linen cupboard should not be placed in the bathroom, as steam penetrates the cupboard and the contents become damp. [203]

Coat Cupboard

For this purpose we recommend the provision of a cupboard 6 feet 6 inches high, 30 inches wide and 20 inches deep (inside measurement), which in most houses could be most suitably located in the lobby. A cupboard of these dimensions would accommodate at least 10 coats on hangers and would meet the needs of the average household of 5 or 6 people. To

NOTE VII : SUGGESTED DIMENSIONS FOR DWARF CUPBOARDS (Paragraphs 195–196)

	<i>Unit without a drawer</i>		<i>Unit with a drawer</i>	
	(i)	(ii)	(i)	(ii)
Height	2 ft. 10 in.	2 ft. 10 in.	2 ft. 10 in.	2 ft. 10 in.
Width	2 ft. 6 in.	1 ft. 6 in.	2 ft. 6 in.	1 ft. 6 in.
Number of shelves	2	2	2	2
Depth of shelves (inside measurement)	12 in.	12 in.	12 in.	12 in.
Distance between shelves (vertically)	10 in.	10 in.	8 in.	8 in.
Distance between base of cupboard and lowest shelf	12 in.	12 in.	10 in.	10 in.
Drawer	—	—	One row of drawers, 4 in. deep—inside measurement.	

enable full use to be made of such a cupboard, a hat shelf 9 inches from the top of the cupboard, a strong rod under the shelf, and a few hooks on the shelf bearers are required. Belting with a few hooks placed about 3 feet to 3 feet 6 inches above floor level, would assist in training small children to hang up their own coats. Rubber and other footwear could be kept on the floor of this cupboard. Wet coats could be hung in the drying cabinet referred to in paragraph 181. [204]

Fuel Store

We have already recommended that the fuel store in an urban house should accommodate not less than 10 cwts. of coal, etc., and we suggest that approximately 42 cubic feet of storage space should be provided, divided where necessary to accommodate two types of fuel. In a full-length store, the space for the fuel could be arranged by providing a floor area of 3 feet 6 inches by 3 feet and front boarding to a height of 4 feet. The floor and part of the front boarding should be of cement and the front boarding continued to a height of 4 feet by the provision of movable boards. If a delivery hatch is provided it should, of course, be at a height convenient for the unloading of coal and may be either opposite or at right angles to the door. The latter position is preferable. A shelf, 12 inches deep, should be fitted about 5 feet above floor level and clear of the delivery hatch. [205]

In rural and mining areas more accommodation for fuel is required and the fuel store should be planned to suit local needs, e.g. to include storage space for wood or peat where necessary. [206]

The fuel store and the larder should not be placed side by side. [207]

General Store

Every household requires accommodation for boxes, suitcases, etc. This store should, if possible, open off a lobby or landing, should have a floor area of not less than 3 feet 6 inches by 3 feet and, wherever the design of the house will allow, this area should be increased. At

the back of this store, there should be two shelves; one 24 inches deep and about 3 feet 6 inches above floor level; the other shelf 18 inches deep and about 5 feet 6 inches above floor level. The upper shelf should be continued along one side of the closet to the door but the side shelf should be only 12 inches deep. [208]

Miscellaneous

(a) *Fittings for lights* should be easily accessible for cleaning and for carrying out minor repairs. Points and switches should, so far as possible, be raised above the skirting board level. In addition to the normal lighting points, adequate supply points should be provided in every room in the house for extra lights and heaters, and in the kitchen-utility room for a cooker, a refrigerator, a washing machine, an iron, etc. [209]

(b) *Meters* Electricity and gas meters should be placed in such a position that the meters may be read, and in the case of prepayment meters money inserted, easily and without climbing. [210]

(c) *Door Handles and Fastenings* We hope that in the post-war period door handles, letter boxes and other small furniture will be available in plastic or other material which does not require polishing. Door handles should be so fitted that they do not become slack and handles of a spherical shape are not recommended, particularly in the kitchen and bathroom, on account of their tendency to slip when the hands are wet. Simple fastenings should be provided on cupboard doors—few cupboards require to be locked. [211]

(d) *Window blinds* and/or *curtain rods* of modern type should be provided with the house. Such provision would prevent damage to the walls of the house on changes of tenancy. [212]

Equipment for Distinctive Types of Households

LARGE HOUSEHOLDS The recommendations made in the foregoing paragraphs are based on a house of 2-3 bedrooms designed to meet the needs of a family of 4 to 6 persons.

NOTE VIII : SUGGESTED DIMENSIONS FOR BUILT-IN HANGING CUPBOARDS OR WARDROBES

IN BEDROOMS (Paragraph 200)

Height	6 ft. 6 in.; Depth—20 in. (inside measurement).
Width	2 ft. (at least) per person, i.e. at least 4 ft. in a 2-person bedroom.
Hat shelf	Full depth and width of cupboard and fitted 9 in. below the top of the cupboard.
Strong rod	Placed a few inches below the hat shelf.
Hooks	A few on the shelf bearers.
Doors	2 doors on 4 ft. width.

In some cases the wardrobe might be provided with a *drawer* at the foot; in others with a low-set shelf, rod, or other *fixture* for *shoes*.

For larger houses designed to accommodate larger families the addition to the kitchen fittings of a 3-foot kitchen unit would probably be sufficient and would form a useful extension to the work-table. Where possible, the general store and the linen cupboard should also be increased. [213]

SMALL HOUSEHOLDS The needs of small households of one or two persons, e.g. single or aging persons could be met, we think, by providing:

(a) *In the kitchen*—a ventilated food cupboard, a cupboard for cleaning materials, a work-table cabinet, and pot racks (placed under a draining board or under a raised type of cooker). In addition to these items of equipment, there would, of course, require to be a sink, tub, draining boards, copper or washing machine, and cooker, etc. In houses for single persons who are at business during the day the provision of an instantaneous water heater should be considered. The dimensions we suggest for the kitchen cupboards are shown in Note IX (below). [214]

(b) *In the living-room*—accommodation for spare china, cutlery, sewing materials, etc., in the form of full-length or dwarf cupboards as proposed in paragraphs 194–197 and Notes VI and VII for family houses. Alternatively, recesses at the sides of fireplaces could be shelved and doors fitted. The living-room cupboards should be on a sufficiently generous scale to allow a few shelves, preferably slatted, for storing linen. [215]

(c) *In the bedroom or bedroom annexe*, a hanging cupboard 20 inches deep (inside measurement) and giving a length of at least 2 feet for each person, with hat shelf, rod, hooks, etc., as recommended for the family house (see paragraph 200 and Note VIII). In these small dwellings any space at a window or in a convenient corner could, if shelved, be used as a cupboard for shoes and other small articles. [216]

(d) *In the lobby, a general store*, approximately 3 feet 6 inches by 3 feet (floor area) with two

shelves, one 24 inches deep and about 3 feet 6 inches above floor level; the other shelf 18 inches deep and about 5 feet 6 inches above floor level. The upper shelf should be continued along one side of the store and should have hooks on the underside to hang outdoor coats. The side shelf should be only 12 inches deep. A separate coat cupboard in the lobby of these small homes is, we think, unnecessary. [217]

(e) *A fuel store*, to accommodate 4 to 6 cwts. of fuel, i.e. a store approximately 3 feet long, 2 feet deep and 4 feet high. If a full-length cupboard is provided for this purpose, a shelf 12 inches deep would be useful for the storage of firewood, etc. [218]

RURAL HOUSEHOLDS (a) *Cooking arrangements* in a rural house should allow for the use of large cooking pots and a girdle. The choice of stove will be influenced by the type of fuel used in the district, but where there is a possibility of electricity or gas becoming available at reasonable rates electric or gas fittings should be provided. In addition it should be possible to do some cooking by solid fuel. Experiments now being carried out may result in new types of stoves being available after the war but it should always be borne in mind that in houses in rural areas good hot-plate space is essential. Cooking should not need to be done in the living-room, if a properly equipped and designed kitchen is provided. [219]

(b) *Larder* In many rural areas shopping facilities are inadequate and supplies are received only once or twice a week. The larder in the rural house should, therefore, be of generous proportions and, where practicable, adapted to meet any special needs of the household. For general use, however, we suggest dimensions as detailed in Note X (opposite), from which it will be seen that we recommend a floor area of approximately 23 square feet. The cold (slate) shelf will be at a height of approximately 2 feet 8 inches above floor level and sufficiently wide to accommodate milk basins. The lowest shelf will be

NOTE IX : SUGGESTED DIMENSIONS FOR KITCHEN CUPBOARDS FOR ONE- OR TWO-PERSON

HOUSEHOLDS (Paragraphs 214–218)

	Ventilated Food Cupboard	Cleaning Materials Cupboard	Work-table Cabinet
Height . . .	6 ft. 6 in.	6 ft. 6 in.	6 ft. 6 in.
Width . . .	1 ft. 6 in.	1 ft. 6 in.	3 ft. 0 in.
Depth . . .	1 ft. 6 in.	1 ft. 6 in.	23 in.
Shelves . . .	As in larder for family house (see paragraph 161 and Note I).	As in similar cupboard for family house (see paragraph 170 and Note III).	As in cabinet for family house (see paragraph 163 and Note II).

about 18 inches above floor level and will, therefore, leave good floor space for pails of eggs, food containers, etc. The larder should be well ventilated and one part, e.g. a side shelf, enclosed with metal gauze doors to form a meat safe. [220]

(c) *Refrigerator* In view of the fact that perishable foods have to be stored for longer periods in rural houses, refrigerators would be of special value in rural areas, if supplies of gas or electricity are available at reasonable costs. [221]

(d) *Kitchen storage units* are required as for

an urban house but additional accommodation is usually required for bottled fruits and vegetables, jam, etc., and for this purpose an additional cupboard may be desirable. [222]

(e) *Clothes drying facilities* The drying cabinet in a rural house should be placed as near as possible to the back door, so that wet outer clothing, etc. need not be taken through the house. The *utility room or wash-house*, if provided, should also be accessible from the back door and thus be convenient for the changing of wet outdoor clothes and boots. [223]

NOTE X : SUGGESTED ARRANGEMENT FOR A LARDER FOR A FAMILY HOUSE IN A RURAL AREA

(Paragraph 220)

Height, 6 ft. 6 in.; width, 6 ft. 6 in.; depth, 3 ft. 6 in. (floor area approximately 23 sq. ft.); doors in centre of 6 ft. 6 in. width to afford easy access to shelves on the side walls.

- (i) Shelf 12 in. deep, round three sides of larder, and placed 9 in. from top of larder.
 - (ii) Shelf 18 in. deep, round three sides of larder, and 12 in. from shelf above.
 - (iii) Shelf 9 in. deep, round three sides of larder, and 8 in. from shelf above.
 - (iv) Shelf 24 in. deep, 6 ft. 6 in. wide, and 14 in. from shelf above. This shelf should be of slate, tiles, etc.
 - (v) Shelf 18 in. deep by 6 ft. 6 in. wide; 12 in. below shelf above and about 18 in. above floor level. It is suggested that this shelf should be slatted for storing vegetables, etc.
- Strong hooks from ceiling of larder.
Space of 1 in. between the back of the shelves and the wall.

APPENDIX TO CHAPTER V

(a) ESTIMATED COSTS OF STANDARD FITMENTS RECOMMENDED IN CHAPTER V

	Estimate A		Estimate B	
	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Kitchen-Utility Room				
Larder	2 3 0		1 15 0	
Work-table Cabinet	2 18 9		2 5 0	
China Store	2 0 0		1 5 0	
Dry Groceries Store	2 0 0		1 5 0	
Brooms and Cleaning Materials Store	1 12 6		1 5 0	
Drying Cabinet	3 2 6		2 5 0	
		13 16 9		10 0 0
Living-room				
Upper Unit	1 15 0		1 5 0	
Lower Unit with drawer	2 5 0		1 10 0	
		4 0 0		2 15 0
Lower Unit without drawer	2 0 0		1 5 0	
Bedroom				
Single Wardrobe 2 ft. wide by 6 ft. 6 in. high	1 15 0		1 5 0	
* Double Wardrobe 4 ft. wide by 6 ft. 6 in. high	2 15 0		2 0 0	
		2 15 0		2 0 0
Lobby				
Linen Cupboard	2 7 6		1 18 0	
Coat	2 0 0		1 5 0	
		4 7 6		3 3 0
* Add two double wardrobes for 3-bedroom house, each	2 15 0		2 0 0	
		5 10 0		4 0 0
Total		<u>£30 9 3</u>		<u>£21 18 0</u>

[224

NOTES

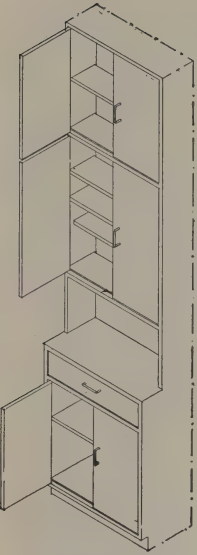
- (i) The "total costs" given are based on the larger of those fitments shown as alternatives; the prices of the smaller alternatives have been excluded from the total.
- (ii) Both estimates are based on 1939 prices and upon standardised bulk production of a sufficient number of fitments to equip 5,000 houses.
- (iii) The estimates have been furnished by Scottish firms equipped to deal with large scale production. [225

It must be borne in mind that not all the above fittings would represent a net addition to the cost of the house. The larder, and sometimes cupboards in the living-room, bedrooms and lobby, are at present provided in the fabric of the house. Moreover, where the design of the house permits, other fitments, e.g. the linen

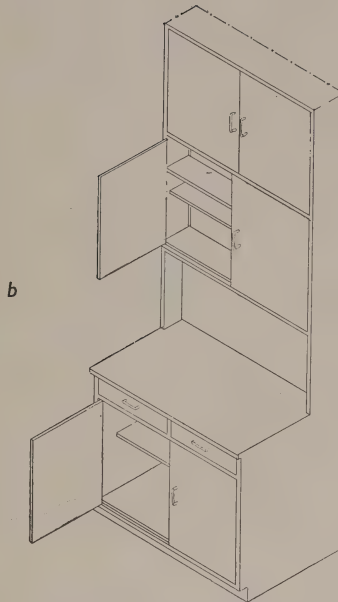
cupboard, coat cupboard, drying cabinet, etc., might also form part of the house structure. [226

Even on the basis of the higher estimate quoted above, and on the assumption that all the fittings including the larder were installed as separate fittings and not forming part of the house structure, the total cost of providing (in a 4-roomed house) all the equipment specified would not exceed £31, which sum amortised over the normal loan period at the normal rate of interest applicable to the housing operations of local authorities before the war would involve an addition to the rental of less than 5½d. per week on the assumption that the total additional cost was recovered in rental. On the basis of the lower estimate the addition to the weekly rental would amount to 4d. Even the former amount seems to us to be a modest sum for the facilities provided by the fitments and built-in furniture which we have recommended and from the evidence which we have received we have no hesitation in concluding that it would be so regarded by almost all tenants. [227

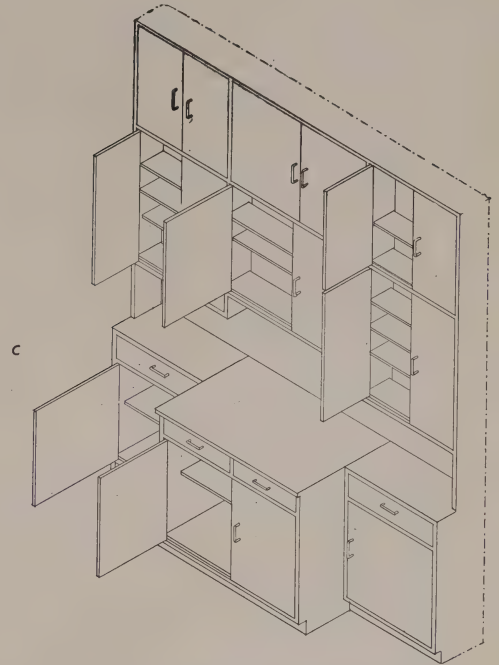
STANDARD FITMENTS: I



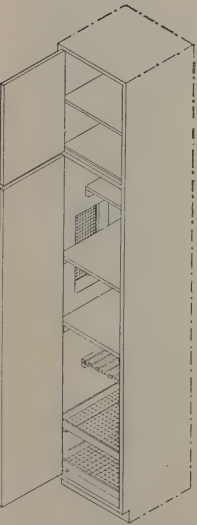
China or dry groceries store (163-4 : II).



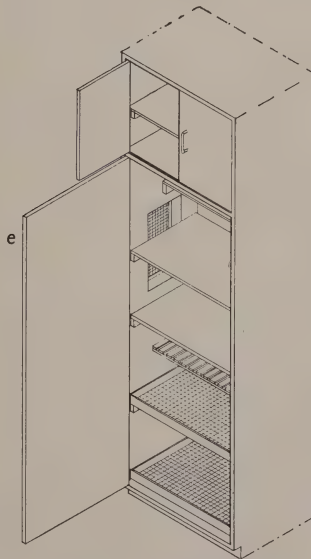
Work-table cabinet (163-4 : II).



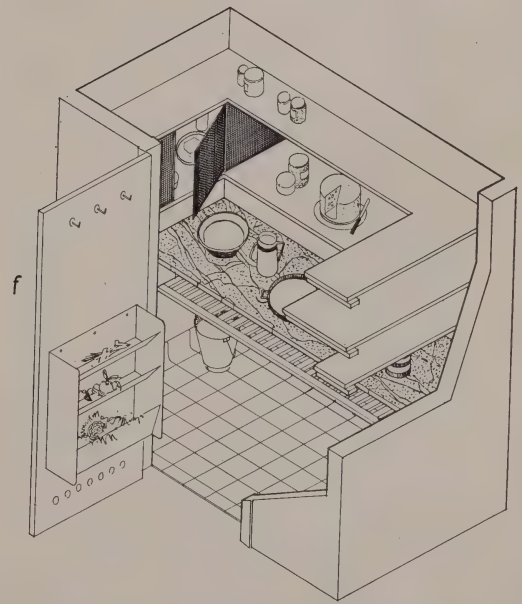
Combined work-table cabinet, china store and dry groceries store (163-5 : II).



Larder for small household (214 : IX).

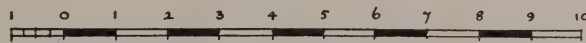


Larder for urban family house (160-1 : I).



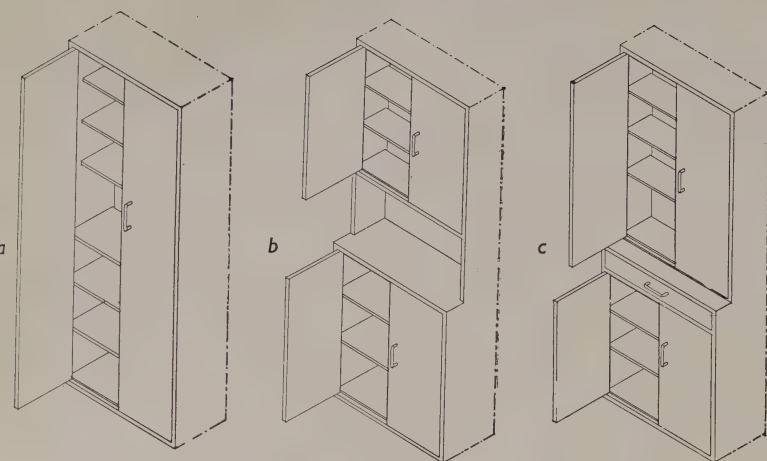
Larder for rural family house (220 : X).

SCALE IN FEET

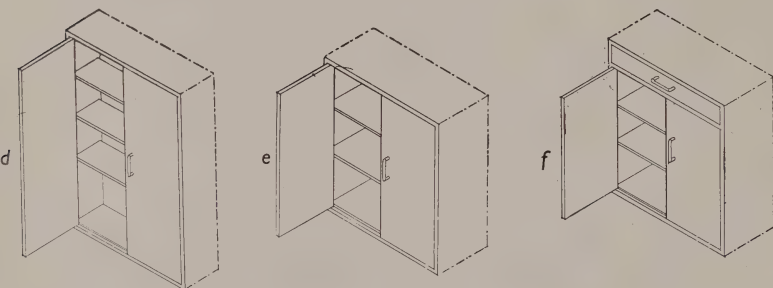


(The references are to paragraphs of the Report and relative notes.)

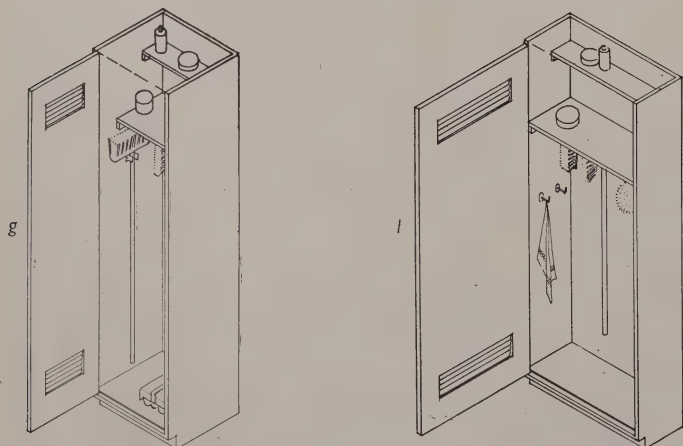
STANDARD FITMENTS: II.

*Living-room cupboards :*

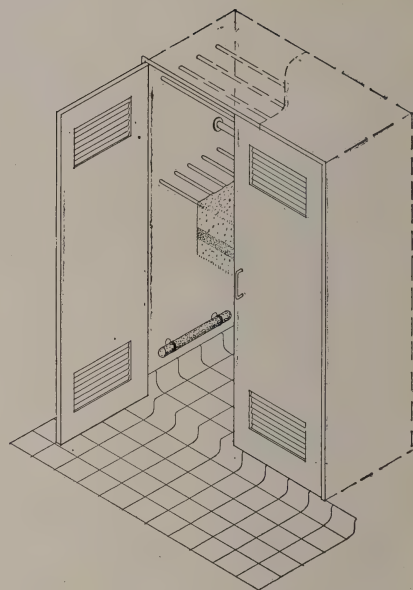
- (a) full-length with flush doors ;
 (b) full-length with space for books, etc. ;
 (c) full-length with drawer in lower portion (193-4 : VI and Appendix to Chapter V).
 (b) and (c) could also form "through" cupboards and service hatch between kitchen and living-room with access from both rooms (196-7 and Appendix to Chapter V).

*Units to form full-length cupboards and dwarf cupboards :*

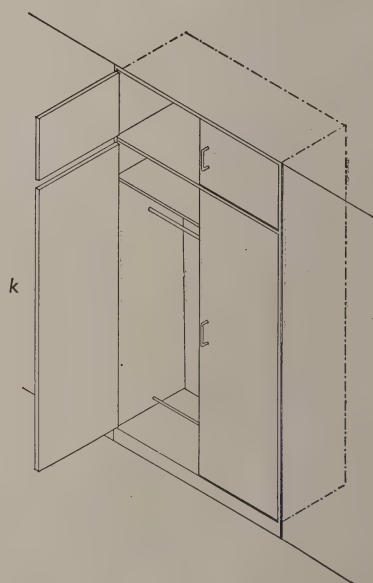
- (d) upper unit (194 : VI) ;
 (e) lower unit without a drawer (194 : VI) ;
 (f) lower unit with a drawer (194 : VI) ;
 lower units (e) and (f) are also suitable for use as *dwarf* cupboards (195 : VII).



(g) and (h) Cupboards for Brooms and Cleaning Materials (170-I : III and IV).

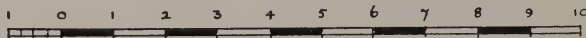


(j) Drying cabinet with set of rods and louvres in doors for ventilation (181 : V).



(k) Bedroom cupboard fitted with hat shelf, rod for coat-hangers and shoe rod (200 : VIII).

SCALE IN FEET



(The references are to paragraphs of the report and relative notes.)

(b) SUGGESTED ARRANGEMENTS OF LIVING-ROOM FITMENTS (see paragraphs 193-199, Notes VI and VII)

Interior	Doors	Remarks
(i) { One upper unit One lower unit <i>without</i> drawer	Two half-width, full-length, solid doors.	Cupboard completely enclosed.
(ii) (a) do.	Two half-width, solid doors on upper unit. Two half-width, solid doors on lower unit.	do.
(b) do.	Two half-width, solid doors on upper unit but 14 in. short. Two half-width, solid doors on lower unit.	Two sections with space 14 in. high for wireless, etc.
(iii) (a) do.	Two half-width, glazed doors on upper unit. Two half-width, solid doors on lower unit.	Completely enclosed.
(b) do.	Two half-width, glazed doors on upper unit but 14 in. short. Two half-width, solid doors on lower unit.	Two sections with space for wireless, etc.
(iv) (a) { One upper unit One lower unit <i>with</i> drawer	Two half-width, solid doors on upper unit. Two half-width, solid doors on lower unit, below the drawer level.	Completely enclosed above and below drawer.
(b) do.	As at (iv) (a) but upper doors 14 in. short.	Two sections with space for wireless, etc.
(v) (a) do.	Two half-width, glazed doors on upper unit. Two half-width, solid doors on lower unit below the drawer level.	Completely enclosed above and below drawer.
(b) do.	As at (v) (a) but upper unit doors 14 in. short.	Two sections with space for wireless.

NOTES

- (1) (i), (ii) (a), and (iv) (a): Could be used wholly or partly as "through-and-through" cupboards between living-room and kitchen.
- (2) (ii) (a) and (iv) (a): The space between the upper and lower units (14 inches high) could

[228 form a service hatch between living-room and kitchen. Access to remainder of cupboard would be from living-room only.

- (3) The possibility of using sliding or shutter doors should not be overlooked. A shutter door forms a convenient cover over a service hatch.
- [229

Chapter VI:

Traditional materials

IT is unnecessary for us to review in detail all the technical questions involved in house construction. This is already being done by the various Study Committees of the Post-War Building Directorate of the Ministry of Works and by the Inter-departmental Committee on House Construction under the Chairmanship of Sir George Burt. We therefore confine ourselves in this section to some general observations on questions especially relevant to Scottish conditions. [230]

Down to the outbreak of the last Great War the traditional building material in Scotland was stone and stone construction is still predominant in some areas. For various reasons, however, stone construction has now been generally superseded by brick construction in most areas. The growing shortage of stone-masons and the increased cost of building in this material are likely to accelerate the substitution of brickwork for stonework for housing purposes. Everything should be done, however, to foster building in stone in those areas where stone-masons are still available and where the tradition of stone building is strong. As a general principle we would recommend that the maximum possible use should be made of local stone for housing purposes, particularly in rural areas, and this recommendation should be read with our recommendations in Chapter VII that in general the highest regard should always be paid to local conditions in questions of construction, design, and layout. [231]

We think it a matter to be deplored that except in a few areas in Scotland it has hitherto been impossible to provide a facing brick of good quality and attractive appearance and it is particularly unsatisfactory that the Scottish brick which has been produced in such large numbers since brick construction became predominant in Scotland is so much inferior to most types of brick produced elsewhere in Great Britain. We understand that the peculiarity of the Scottish brick is not principally due to the absence of suitable clay deposits but simply to the fact that these clay deposits have never been utilised on an appropriate scale. We are,

STANDARDS OF CONSTRUCTION

therefore, gratified to learn that the Scottish Council on Industry are at present carrying out enquiries through the Scottish Development Council into the possibility of expanding the output of bricks for the purposes of the Scottish post-war building programme and, in conjunction with the Geological Survey, are investigating the possibility of utilising suitable clays in Scotland for the production of a satisfactory facing brick. We attach great importance to these enquiries. In our opinion, a most useful contribution could be made to the improvement of the external appearance and design of houses to be built in Scotland after the war by the introduction of a satisfactory facing brick. [232]

New methods

It is feared that the shortage of building craftsmen and of some traditional building materials will be acute in the immediate post-war years at the very time when the demand for housing accommodation will be at its height. In these circumstances it will be absolutely essential to adopt alternative methods of house construction of proved reliability and efficiency. Investigations into alternative methods of house building are at present being carried out by the Burt Committee and it is not our function to deal in detail with alternative methods. We shall therefore confine ourselves to the following general observations. [233]

During the inter-war years a great deal of enterprising work in alternative methods of house construction has been carried out in Scotland and the special powers given to the Scottish Special Housing Association in 1937 to employ alternative methods of building have been most valuable in this respect. Scottish public opinion is for this reason more than usually receptive of new methods and new ideas in house construction and we hope that a very high degree of enterprise and initiative will continue to be displayed in this field in Scotland. Having regard to the magnitude of the immediate post-war housing need, we consider that a positive policy on experimental building should be adopted forthwith as an integral part of the Government's preparations for the post-war

housing programme. We are satisfied that unless a programme of experimental work is carried out during the war and has produced results which have reached an advanced stage by the conclusion of hostilities, it will be impossible to secure the incremental output which is expected from alternative methods of building. In our opinion, a great deal of work could be done now in this direction. We need only mention as an example the speed and volume of output which can be secured by the poured cellular concrete method of house construction which has been successfully adopted by the Scottish Special Housing Association. We think that this method of construction shows great promise for the purposes of the post-war programme but further experimental work on the internal and external finishing of houses built by this method is required. This system enables foundations and walls of ten two-storey houses to be constructed in one week, but comparatively little research has been done on the possibility of accelerating further work on the house when this stage has been reached. In the result, it has been found that the delay involved in the finishing trades where this method of construction has been adopted is in many cases so great as to nullify the most valuable acceleration secured in the initial processes of building. [234]

* We foresee the possibility of important developments in other alternative methods of building, for example, in timber, steel, etc. Local authorities and the Scottish Special Housing Association have experimented successfully with a number of forms of timber construction and we think that in many areas in Scotland (particularly rural areas) timber houses can make a most valuable contribution to the satisfaction of post-war housing demands. In the inter-war years about 2,500 steel-clad houses of various types were erected in Scotland and these houses have been most favourably reviewed in recent technical reports which have been made available to us. In view of the capacity of the steel industry in Scotland and the extent to which methods of building involving the use of steel lend themselves to prefabrication, we think that further experiments should be carried out into the possibilities of developing the potentialities of steel in house building, not only as cladding material but also for the structural framework of the house. [235]

Technical details

It is not our intention to deal in detail with all questions relating to standards of house con-

* See reservation on this paragraph by Mrs Jean Mann (page 96).

struction. As we have already explained, the various Study Committees of the Ministry of Works and the Burt Committee are carrying out technical investigations into all the factors involved and propose to summarise the various technical criteria which should be applied. The general observations which follow are designed mainly to draw attention to the most obvious technical considerations which affect the amenity and comfort of the dwelling from the point of view of the occupier. [236]

WEATHERPROOFING It is obviously essential that all houses should attain the maximum possible standards in this respect and it is particularly important that these standards should be required in all alternative methods of house building. In Scotland in the inter-war years almost all brick houses have been rendered weatherproof by external rendering, that is, either by rough-casting or by some form of dry dash. We have already expressed the hope that it will be possible to devise a satisfactory facing brick which will make such expedients unnecessary. Much of our evidence lays great emphasis on the depressing drabness and uniformity of much of the finishing of houses built in Scotland in the inter-war years. The unfortunate effects of rough-casting and even of pebble-dash rendering from the point of view of appearance arise principally in urban areas, where within a short space of time the external rendering becomes coated with dust and dirt. We hope that further research will be undertaken to devise a satisfactory form of finishing material which can be economically applied to houses in urban areas. At present most of the finishing materials, e.g. faience tiles, etc., which would improve Scottish housing in this respect and provide a finish which could easily be cleaned and maintained are too expensive for low-cost housing. [237]

THERMAL INSULATION Technical improvements have been made in recent years in various kinds of insulating material and these new materials are likely to be of great value, especially in relation to alternative methods of building. Most of these materials are manufactured products which can be produced in sections and are capable of being readily fitted up as internal linings to the house, thereby securing substantial acceleration and economies in the internal finishing processes. [238]

SOUNDPROOFING Of all defects in construction none is more disturbing to the amenity and comfort of the home than inadequate soundproofing and it has been represented to us in the strongest terms that many of the houses erected in the inter-war years, particularly flatted houses and "tenements,"

have been deficient in this respect. As regards municipal houses economies have been insisted upon which have resulted in inadequate sound insulation in many of the houses built by local authorities. [239]

We think that higher standards of sound insulation, particularly in flatted houses and flats, should be regarded as absolutely essential. Recent researches into the whole question of sound insulation by the Building Research Station and the Acoustics Committee of the Post-War Building Directorate of the Ministry of Works have demonstrated that substantial improvements in sound insulation can be secured at comparatively reasonable cost by such methods, for example, as providing 11 inch hollow party walls between houses and by incorporating a layer of glass wool or other similar material within the construction of floors, combined with a floating floor; these and other methods will be fully dealt with in the Acoustics Committee's report. We urge that such improvements be incorporated in all houses to be built in Scotland after the war. We think that from many points of view sound insulation is of at least equal social significance to any other factor in construction and we would deprecate any tendency to secure economies in building costs by a reduction of standards in this respect. [240]

Effective sound insulation is not, of course, purely a question of construction. Much depends upon the internal planning of the house and the arrangement of rooms in adjoining houses and flats. Wherever possible, for example, cupboards should be located in such positions that they can provide "baffles" between one room and another and between one house and the next. Noisy apartments such as living-rooms and kitchens should be planned in juxtaposition and bedrooms should, as far as possible, be isolated and planned together. [241]

The proper siting of houses in relation to roads and streets is also of great importance in reducing the effects of traffic noise, the noise of children at play, etc. We go into these questions in more detail in Chapter VII. [242]

WALL, FLOOR, ETC., FINISHINGS

The finishing of walls and floors to suit the various functions of the various rooms in the house is of great importance to the housewife. All unnecessary woodwork which harbours dust and makes the efficient cleaning of the apartments more difficult should be eliminated and coved skirtings rounded at the corners of the rooms should be provided wherever practicable. It is possible that the recent development of new materials may be of great value for post-war housing purposes in this respect. We understand, for example, that although plastic materials are likely to be too

expensive for general use throughout the house in the immediate post-war years, it may be practicable to use these materials for such limited purposes as the manufacture of components which can be mass-produced in standardised sizes, for example, skirtings, door handles, etc. [243]

In certain apartments—the bathroom, kitchen and utility room—we think that an impervious washable wall-finish is essential. These apartments should in our view be tiled or finished in some equivalent material up to a height of at least 4 feet 6 inches above the floor level. It is particularly important that the surface of walls near the sink, gas cooker, wash basin, bath, and w.c. should have a washable finish. In other apartments a distempered finish will normally be regarded as satisfactory in most of the houses with which we are principally concerned. [244]

For flooring, we agree that no material is so satisfactory from all points of view (except in the kitchen and utility room and to a lesser extent in the bathroom) as timber, and timber flooring should be provided wherever practicable. We hope that steps will be taken to ensure the availability of sufficient timber supplies for the purposes of the immediate post-war housing programme but if timber is in short supply in the immediate post-war period we should prefer that any timber available for constructional purposes should be used to provide floors and that substitute materials should be principally confined to roofing. If, owing to very acute shortages of timber, concrete floors must be used for a limited period, very great care should be taken in the selection of a suitable floor finish. [245]

In the kitchen and utility room an impervious floor may be regarded as preferable and we recommend that the floors of these apartments should be finished in quarry tiles or some other suitable material. [246]

TYPES OF WINDOW In the majority of the houses built in Scotland in the inter-war years the double-hung (or sash-and-case) timber-frame window has been installed and, although it is not entirely free from faults, it has in general proved satisfactory. We suggest, however, that windows of this type on all floors of all houses should be so constructed that they can be opened inwards to facilitate cleaning. [247]

Our evidence shows, however, that the casement window is now coming to be preferred to the sash-and-case window in Scotland. The most common form of casement window is the metal-frame type. Windows of this type can be satisfactory provided they are well constructed and designed to eliminate the danger of water percolating through the joints between the

MATERIALS: I

STONE : The traditional Scottish building material is well illustrated in the early nineteenth-century cottage shown in (1) and in the modern terrace of cottages illustrated in (2).



HARLING : Used as a finishing material, both with traditional stone construction (3) and as an external rendering on modern houses built in brick (4).



TIMBER : A useful alternative material for both rural (5) and suburban development (6).

STEEL AND CONCRETE : About 2,500 steel clad houses (7) were built in Scotland in the inter-war years, and further experiments are in progress.

Before the war a number of houses were built in poured concrete: (8) shows the concrete shuttering still in position just after completion of the construction, within 72 hours, of the walls and foundations for a block of four houses.



MATERIALS: II



FACING BRICK : Facing brick has been very little used for Scottish housing. It weathers well in urban conditions without becoming unsightly in appearance and the development of a good facing brick in Scotland is much to be desired.



REINFORCED CONCRETE : These photographs illustrate some of the potentialities of modern reinforced concrete construction in the development of blocks of flats.

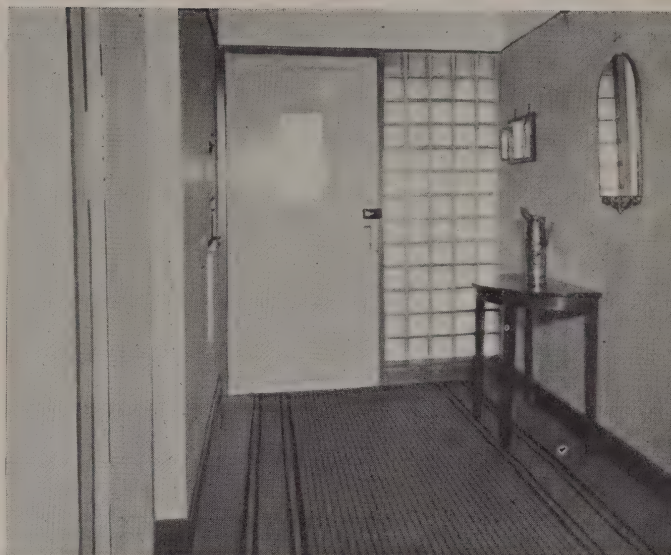


PREFABRICATED TIMBER : Before the war a few prefabricated timber houses were built in Scotland to Scottish designs. The types shown illustrate houses built by the same methods of construction in Sweden to Swedish designs.

MATERIALS: III



1



2



3

THERE is room for further development in external and internal finishing materials. Glass bricks (1 and 2) can improve external appearance as well as providing more daylight inside the house.

Faience tiles (3) provide an easily cleaned and attractive finish for external purposes.

In the bathroom and kitchen-utility room the wall finish should be smooth, impervious and washable (4). A tiled or similar surround on the wall near the sink and cooker (5) minimises the work of the housewife.

4

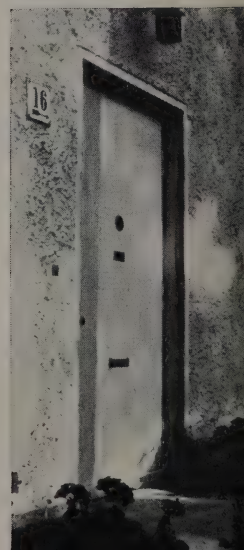


5



DOORS

External doors should be simply designed and in the interests of ease of cleaning and maintenance flush doors are to be preferred.



WINDOWS



THE sash-and-case timber frame window (below) is the traditional type in Scotland and is widely favoured both for its utility and attractive appearance when well designed.

The modern casement window, especially of the steel-framed type (above), is however becoming more popular and was utilised to a substantial extent by local authorities before the war.



DETAILS OF CONSTRUCTION

SHORTAGE of timber for roofs during the war has compelled us to make a virtue of necessity and the photograph of a Scottish war-time housing scheme (right) shows how successfully new designs have been adapted to suit the new techniques which the use of the flat roof involves.

The photograph below shows that flat roofs, skillfully used for flats of modern design, need not be unattractive even in an attractive setting.



ROOFS



AIRCASES

Entrances to, and staircases in, blocks of flats are capable of substantial improvement in design. The illustrations above show some possible lines of development.



BALCONIES AND LIFTS



BALCONIES : Verandah-balconies in flats enable young children to obtain fresh air and sunshine under the eye of the mother. They should be designed so that the children can see what is going on without being tempted to clamber on to the parapet.

Access balconies (below) are not commended. It will be seen that they reduce the natural light available to each flat below the balcony and disturb the amenity and privacy of rooms facing the balcony.



LIFTS : All blocks of flats over three storeys in height should be provided with lifts automatically operated and capable of carrying both passengers and goods. This photograph illustrates lifts of this type provided in working-class flats in Leeds. The button calling the lift is installed at a height sufficient to make it difficult for children to operate the lift.

DESIGN : I

THE houses we build will make or mar their environment for generations. The squat square two-storey blocks in I are self assertive in a beautiful landscape which resents their intrusion.



Contrast the discretion and dignity with which the houses shown in 2 both in design and siting have taken their place in a beautiful setting.



DESIGN II



DRAB uniformity and pretentious artificiality are both faults in design to be studiously avoided. Good design consists pre-eminently "in the use of simple compositions and in the careful proportioning of the essential elements in the house structure—fabric, doors, windows and roofs."



metal frame and the hinged sashes, and are well fitted—preferably in wood or concrete frames; the inside sill should be formed of impervious material so as to obviate trouble from condensation on the metal frame. [248]

Evidence which we have received from housewives and women's organisations emphasises the desirability of reducing the number of small panes in modern windows, particularly of the casement type. A large number of small panes is undoubtedly difficult to clean, but the higher cost of replacing larger panes must also be kept in mind. [249]

VERMIN INFESTATION All local authorities are familiar with this problem in varying degrees. In the long run the solution of the problem depends upon rising standards of personal hygiene, but some local authorities take special precautions in appropriate circumstances against vermin infestation of the house structure by eliminating, for example, unnecessary cavities between built-in fittings and walls, providing metal door standards, concrete or tiled skirtings, etc., which are impervious to infestation. Each local authority, under the guidance of the Department of Health, will require to decide in the light of local conditions the extent to which such measures should be adopted. [250]

Some questions of cost

A number of local authorities have represented to us two main points which have an important bearing on standards of house construction.

(a) They have maintained that in many cases they had specified items or finishings which they did not regard as extravagant but which had been rejected by the Central Department in favour of cheaper substitutes. They also maintained that the substitute materials and fittings had been of inferior quality and in the result had involved higher maintenance costs than would have been incurred had their original specifications been accepted. [251]

(b) It has been alleged that the practice of the Central Department of requiring the local authority to accept the lowest tender in all cases has had a detrimental effect upon standards of construction and has resulted in unsatisfactory materials being used and in unsatisfactory workmanship. [252]

We have the following comments to make on each of these points:

(a) We have no doubt that the temptation upon the Central Department to reduce initial

capital costs at the expense of higher maintenance costs being incurred on the dwelling subsequently by the maintaining authority has been strong at different periods in the inter-war years. We need only mention in this connection the years of financial stringency of 1921–22 and 1931–34. Our conclusion, however, is that on the whole this temptation has been fairly successfully resisted and that there is no serious ground for complaint in the standard of quality of the fittings, components, etc., installed in houses built by local authorities in the inter-war years. The temptation may, however, recur and it may be worth while to enter a caveat that in our view it is in the highest degree imprudent to reduce standards of construction to a level which will involve substantial and increasingly higher maintenance costs on the buildings in later years. Such a practice would indeed be unwise in the ordinary conduct of business and both central and local authorities have a duty even to exceed normal standards of business prudence by virtue of the social responsibilities which they exercise. [253]

(b) Local authorities have not always been required by the Central Department to accept the lowest tender. They have been entitled to represent to the Department their reasons for recommending that the lowest tender should not be accepted, and on many occasions the Department have agreed with local authorities who have made such representations. While we think it important, however, to state the factual position in this way, we realise that the present system contains the latent danger of tender prices being cut by offerers by the rather dubious device of reducing standards and utilising inferior material. We understand that this is one of the considerations at present being examined by a committee of the Government which is going into the whole question of the placing and management of contracts. Pending this committee's findings we content ourselves with making certain suggestions later in this Report for dealing with the special difficulties of the immediate post-war years (Chapter VIII, paragraphs 340–344). [254]

Standardisation and Prefabrication

We make many references elsewhere in this report to the desirability of standardisation and prefabrication being fully developed and in view of the wide public interest in these questions it may be useful if we review them in general in this chapter. [255]

STANDARDISATION It is necessary to make a distinction between (a) standardisation of building components and elements in the house structure and (b) standardisation of fittings and items of equipment. The term is often, it seems to us, loosely used and to avoid ambiguity we think that these two aspects of standardisation in relation to house construction should be separately considered. [256]

On (a), it is obvious that standardisation has already been secured to some extent in the sense that almost every house includes a limited number of standardised components, such as doors, windows, etc. The main difficulty is that in the past there have been such wide ranges of standardised patterns that standardisation has not been fully effective either in increasing the production of components manufactured to these patterns or in reducing costs of manufacture. Moreover, we have received evidence to the effect that the apparently capricious variations introduced into essentially the same type of house by different designers have made it impossible for lengths of joists, sizes of windows, doors, etc., and other essential components in the house structure to be planned to standard sizes by the manufacturers. This has involved a great deal of additional work in the factory or on the site and has slowed down the speed and increased the cost of building. We are impressed with these arguments and, although we would deprecate unnecessary limitations being imposed upon design, we think that further consideration must be given to the possibility of determining standard sizes and patterns in the interests of speed and economy. During the war a great deal of progress has been made in standardising patterns and sizes for various components essential to the house structure, *e.g.* doors, windows, etc., and we understand that the Standards Committee of the Post-War Building Directorate is considering possible developments of these standards for the purposes of the post-war building programme. [257]

On (b), which we assume to be the most important aspect of standardisation for post-war housing purposes, a great deal of further work requires to be done. It is widely appreciated that standardisation of fittings and items of domestic equipment, *e.g.* kitchen fittings, cupboards, presses, hot-water cylinders, baths, wash-hand basins, wash boilers, washing machines, etc., is essential to secure bulk production and to reduce costs. In fact, most of our recommendations in Chapter V on specific items of equipment have been framed on the basis that these items will be standardised to the dimensions which we have given. Great public interest is being taken in the possibility of the standardisation and mass-production of household equip-

ment and fittings after the war but in our opinion some positive action is required by the Government to ensure that effect will be given to the principle of standardisation to secure the results which public opinion demands. Quite clearly, the determination of standard sizes and patterns by committees such as our own will have no effect unless the building authorities in concert with the manufacturers take the necessary steps to see that items of equipment are produced to these patterns in the numbers required and at prices which are appropriate for low-cost housing. The Government, it seems to us, has acquired abundant experience as a result of the war production programme to enable it to determine precisely what measures are necessary to secure these results, and we think that immediate consultations with industry are necessary to make sure that all the essentials of household equipment can be made available quickly and cheaply as soon as the post-war house-building programme can be commenced. It may be, for example—and it is on points like these that we do not feel competent to comment in detail—that some form of bulk purchase administration will be necessary to give sufficient guarantees to the industries concerned to enable them to undertake the installation of additional machinery or the alterations to existing plant which may be necessary to secure bulk production of standardised items of domestic fittings. Public opinion expects the same degree of efficiency to be applied to the satisfaction of urgent and immediate post-war needs as has been displayed in the production of essential equipment for war purposes, and we would therefore strenuously urge that the necessary consultations be undertaken at the earliest possible date. [258]

While we recommend that all this preparatory work should be undertaken immediately so that the planned production of standard items of domestic equipment can, if possible, be related in time and scope to the actual post-war house-building programme, we appreciate that it is probable that standard equipment will not be immediately available for houses built in the first year or so after the war. The actual programme of house building cannot, of course, be held up on this account and must indeed proceed with all possible speed. We therefore recommend that all house plans of local authorities should take account of the standard dimensions which we have formulated, or which may subsequently be agreed between the Government Departments and the industries concerned with the production of domestic equipment, so that such equipment can be installed as soon as it is available. With this object in view the model plans incorporated in this report and recommended for immediate application in the post-

war period take account of the recommendations for standard equipment made in Chapter V of the report. [259]

Concurrently with the development of standardisation of building components, house fittings and items of equipment, it is in our opinion essential that effective measures should be taken to co-ordinate and amend existing building regulations. The differences in standards and practice required by various local authorities have in the past been detrimental to the development of standardisation on the lines we have in mind. Without a large degree of standardisation of building components and house fittings the post-war housing programme will be seriously impeded and it is essential that with technical improvements in this direction there should be linked up necessary amendments and codification of the provisions regulating building practice in these matters. [260]

PREFABRICATION This term also is often loosely used in relation to house construction. In a sense, every house built by traditional construction includes a wide range and variety of prefabricated components. When the term "prefabrication" is, however, employed in modern contexts dealing with house construction, it is usually taken to mean the manufacture and assembly of materials or units otherwise than in their final position. In this sense, prefabrication may be considered from two points of view. [261]

(i) As a supplement to traditional methods of

building, that is by the extension of the range of "ready made" standardised components, e.g. windows, doors, etc., and house fittings. In this sense the principle of prefabrication has already been accepted and, having regard to our recommendations for the highest degree of standardisation of house building components and fittings, we would welcome its wide extension. Experiments are now in progress for example into the possibility of prefabricating plumbing units and even wider prospects are opened up by the research work at present being carried out on the prefabrication of combined kitchen and bathroom units. All these experiments seem to us to show great promise and, although more experimental data are required, there can be little doubt that if such processes are successful they will increase the speed of building and effect substantial economies in cost. [262]

(ii) As a process, alternative and supplementary to traditional building processes, that is, the machine manufacture of the principal structural elements in the house. It is not our province to deal in detail with this aspect of prefabrication which is at present being examined as part of the whole field of investigation of alternative methods of building by the Inter-Departmental Committee on House Construction to which we have already referred. We need only re-emphasise that we attach the highest importance to the work of this committee and we hope that with their investigations will be linked up a positive and ambitious programme of experimental building. [263]

Chapter VII: DESIGN, LAYOUT AND AMENITIES

What is design?

HOUSE design involves to such a large degree questions of opinion and taste that in making our recommendations under this heading we have felt bound to avoid any hard and fast dogmatism in matters of detail. We think, however, after careful consideration of the evidence we have received, that two general conclusions are established—firstly, there is a great deal of public dissatisfaction with the design and character of many of the houses erected in Scotland in the inter-war

years. The monotony and drabness of many of these schemes and the ease with which "Council houses" are identifiable even by the least discriminating are matters of frequent comment. Secondly, the salutary effect of the recommendations contained in the Report of the Scottish Architectural Advisory Committee in 1935, in securing improvements in the design of houses built by local authorities since that date is beyond dispute and that Committee's conclusions have formed the basis of our comments and recommendations in this Chapter. On most questions of detail relating to design, layout and amenities we have not thought it

necessary to recapitulate the Scottish Architectural Advisory Committee's recommendations which we hope will continue to be studied and applied. [264]

In our view, the essence of good design is that it must express the functions which the building has to perform.* Houses are the product of an industry which is concerned to meet essential consumer requirements. In these circumstances, the public are coming to expect at least as high a standard in house design as they expect, and sometimes find, in the design of other consumer goods, *e.g.* motor-cars, etc. For these reasons we think that two factors are of paramount importance—(a) simplicity in design, by which of course we do not mean crudeness in the sense in which it has been manifested in so much housing development in the inter-war years; and (b) the choice of the designer. House design is a field for the specialist and the expert, and we, therefore, recommend that in all cases building authorities should be required to employ an architect for their housing schemes. We suggest that the most effective way of enforcing this requirement might be to make compliance with the requirement a condition of receiving Government subsidy. We think it anomalous that, while specialists are employed in other fields, *e.g.* highway construction, construction of sewage and drainage services, etc., there is no obligation upon building authorities to employ a specialist on the design of dwellings which are going to make or mar their environment for 60 to 100 years. In this connection we observe that Section 75 of the Housing (Scotland) Act, 1935, requires local authorities to have regard to artistic quality in the layout, planning and treatment of the houses to be provided, the beauty of the landscape or countryside, and the other amenities of the locality and also requires local authorities to comply with any directions given to them in such matters by the Department of Health. The same section of the Act of 1935 also provides that "for their better advice" on such questions any local authority may set up, or may be required by the Department to set up, a local advisory committee, including representatives of architectural and other artistic interests. The positive powers contained in these provisions of issuing directions and requiring the appointment of local advisory committees have never been exercised although the Department of Health have of course advised and guided local authorities on questions of house design both generally and in relation to particular proposals. We believe that most local authorities are

anxious to achieve the highest possible standards of house design and layout but we think that in appropriate circumstances the Department should not hesitate to make full use of these powers to give effect to the recommendations which we make in this Chapter. [265]

It will be clear from the first of the principles which we have formulated that good design in the sense in which we have used that term is not a question of extravagant embellishment and ornament. Indeed we agree with the Scottish Architectural Advisory Committee that the best standards in house design in Scottish conditions in fact effect economies in construction. The secret of successful design lies in the use of simple compositions and in the careful proportioning of the essential components in the house-structure—fabric, doors, windows and roofs. Thus the fewer different materials used on the exterior of the house, the better the appearance will usually be, as different materials of varying quality and texture tend to disturb the composition and to create a restless effect. We illustrate these points in our report. [266]

How the house should look

INTERNAL FINISHINGS, DOORS, SKIRTINGS, ETC. We have already dealt in Chapter VI with internal finishings, etc., in so far as they affect standards of construction. From the design point of view we need only emphasise that simplicity in internal finishing should be the main aim. This does not mean that we envisage crude uniformity in the internal finishing of houses to be built after the war. The possible development of alternative finishing materials such as plastics and other forms of composition finish to which we have referred in the preceding chapter, may lead to a greater variety of colour treatment in internal finishings, but we have visited a number of houses in which normal finishing materials were utilised with excellent effect to secure a variety of colour treatments, especially in such apartments as the kitchen and the bathroom. [267]

EXTERNAL FINISHINGS, TYPES OF ROOFING, ETC. We have already stressed the importance of further consideration being given to types of external finishing as alternatives to the monotonous use of roughcast or harling. We should particularly welcome alternatives which would permit of a more attractive use of colour and texture in external finishing; so many of the coloured rough-

* See the definition of design contained in paragraph 2 of the Report by the Council for Art and Industry—"Design and the Designer in Industry" (1937):—"In its broadest sense design means planning in relation (a) to function: the article produced must be fit for its purpose; (b) to form, or, more widely, to aesthetic value with due regard to form, texture, colour and the aptness of any decoration."

cast renderings used on houses built in the inter-war years have, in our opinion, not proved completely satisfactory. [268]

* Of all features of external appearance and design none is subject to so much divergence of view as the design and type of roofing and the nature of roof coverings. To some extent, of course, these questions will be determined by the availability of timber and other supplies in the immediate post-war period and post-war conditions in this respect are at present unpredictable. We regard flat roofs, especially in houses of the cottage and flatted type, as an alternative to be adopted with discretion, but for flats we have little doubt that the flat roof could be more extensively used than it has been in Scotland in the past without detriment to external appearance and architectural quality. [269]

Roof coverings for pitched roofs, will depend upon the tradition and character of the environment but we would urge that there should be a judicious variety in types of roof coverings in most areas. We would also urge that wherever practicable Scottish slates should be used for slated roofs and we hope that the slate industry in Scotland will be revived so that it can play an important part in the post-war house building programme. In no circumstances can we commend the use of cheap substitutes for slates or tiles as roofing materials. [270]

Layout of houses and flats

The general character of the layouts of housing schemes developed by local authorities in the inter-war years is universally familiar and we do not think it necessary to describe in detail the various types of layout adopted. We simply enumerate some of the most important matters brought out in our evidence and emphasise particularly some of the criticisms which we have received. [271]

Many schemes have been extravagant in widths of roads and streets and in the arrangement of these services in relation to the site as a whole. The widths of roads and streets should in all cases be limited strictly to the volume of traffic which they will require to carry, and there is no justification for planning roads and streets in housing estates in such a way and to such widths that they can be used as general traffic roads linking up as through communications with the main communications system of the district. Both the general law and local regulations and bye-laws provide for excessive widths of carriageway and, if rigidly adhered to, would necessitate almost every road

in every housing scheme being a through road, resulting in increased danger to children, increased traffic noise and fumes, and all those other disturbing factors which break down the privacy and amenity of housing estates. We should make it clear that our criticisms in this respect relate to the widths of carriageways of roads and streets; we should not like to see corresponding reductions in the distances between building lines. [272]

Comparatively little imagination has been shown in many housing layouts in varying the lengths and widths of roads and streets serving the schemes. We should like to see more ingenious use made of cul-de-sac development, recessed crescent effects on wider roads and, in appropriate circumstances, the recessed open forecourts with indirect approach to houses which we have seen so attractively utilised in some of the schemes which we have visited. [273]

All these matters are, of course, dependent upon contours, length and depth of building block, provision of open space either as ornamental margins to roads and streets or as pockets of playing space for children and we go into some of these questions in greater detail below. We should, however, like to mention here that it is apparent from the evidence which we have received that in the majority of housing schemes there has been insufficient variety in lengths of block and in the types of houses comprised in the schemes. We have already emphasised the monotonous effect produced by the repetition of the flatted block in the vast majority of local authority schemes built in the inter-war years. No fewer than 57 per cent. of all houses built between 1919 and 1939 were houses of this type and only 15 per cent. were houses of the cottage type. In the result there has been very little opportunity for local authorities to develop the cottage house in longer terraced blocks which would have improved so substantially the architectural character of housing layouts in Scotland. [274]

Road and street layouts in relation to the development of flats require the most careful consideration. The traditional practice in the past has been to locate "tenement" flats in long blocks on frontages to roads, roads whose width between buildings was normally required to be at least one-and-a-quarter times the height of the blocks. In many areas "tenemental" development has been carried out on a grid pattern which results in wholly or partly enclosed hollow squares comprising the "back greens" or "back courts" behind the tenement blocks. In England and elsewhere, on the other hand, where flat or "tenemental" development is on the whole so unfamiliar as not to be

* See reservation on this paragraph by Mrs Jean Mann (page 96).

burdened with traditional inhibitions, the whole problem of the layout of flats has been approached in an entirely different way. In many schemes of flats which we visited in England we found that the blocks were so disposed on the site as to create, as far as practicable, an independent residential unit not broken up by wide roads and streets and with none of the "back-court" effect of the traditional Scottish tenement. In the best schemes which we saw, the blocks were located on the site in parallel and so planned that the essential living quarters of each flat had a south or south-west aspect. The space between blocks was tastefully planted and the blocks themselves were so designed as to be equally attractive in appearance both from the "front" and "back" views. Piping, for example, was taken inside the blocks with the result that the external piping which is such a characteristic and unattractive feature of the back elevations of Scottish tenements was wholly eliminated. In our opinion the whole problem of the layout of flats in Scotland requires the most careful reconsideration. It is not enough simply to provide a massive and rather imposing façade to main streets and to leave the courtyards, or "back greens" as they are popularly known, behind that façade simply to look after themselves. All future schemes of flats should in our view be so designed that the best possible use is made of all the space which higher density flat development leaves available. We should like to see schemes of this kind properly planned to provide adequate playing facilities for children, communal gardens for tenants and other community services such as small community centres, adequate facilities for drying clothes in the open air, communal laundries and drying rooms where required, and the like. We incorporate in this report photographs and plans of the schemes which we have visited and on which our observations are based. [275]

One point relating to the design, planning and layout of flats deserves special mention. In many schemes of flats which we visited in England we found that access to individual flats on each storey was provided by continuous balconies. We appreciate that this type of access has some advantages in providing greater freedom to the designer to vary the sizes of flats in the block, in reducing fire risks and in facilitating the subsequent installation of lifts should this be found desirable. On the other hand the access balcony reduces the natural light available to each floor below the balcony and disturbs the amenity and privacy of rooms facing the balcony. It is true that the effect of

some of these faults can be mitigated by attempting to ensure that the living apartments of the flat do not overlook the balcony but such a solution is never complete; we therefore do not commend this type of access. [276]

† In conclusion, we should like to stress the fact that great care must be taken to avoid planning schemes of flats on such a scale that they become "garrisons" or "colonies" with no proper social focus. As a result of our visits to many schemes of flats of varying sizes we are inclined to think that each scheme should comprise not more than 400-450 flats if it is to be planned on a compact community basis. It is not, of course, implied that a single site or area suitable for the development of flats should not contain more than this number of flats. Our point is that the layout of the flats, the provision of community services, children's play space, etc., should be designed to group the flats in "residential units" each of which should comprise a number of flats not larger than the number specified. [277]

Density

* The determination of the densities appropriate to different types of development is primarily a question of town planning and we do not think it necessary to go into this question in detail in this report. [278]

* We should, however, like to mention one special point. In visiting many schemes of flat development we found that the application of a "rule of thumb" density formula is a most unreliable guide to the merits or demerits of schemes of flats. Many schemes of flats of comparatively high density were so disposed on the site and were provided with such community services that they were in all respects superior to other schemes of lower density which simply left bleak expanses of open space behind and around the flats which seemed to have little social significance and purpose. Indeed, it was apparent from the latter schemes that the effect of applying rigid density formulæ had simply been to space out the blocks without consideration being given to the space unoccupied by buildings. In this connection it is worth bearing in mind that flat development in 3-storeyed blocks at a density on any particular site of 24 houses to the acre—the most popular density formula applied to "tenemental" development in Scotland in the inter-war years—leaves as free space 80 per cent. of the site. This space cannot

† See dissentient memorandum by Mrs Jean Mann (page 95).

* See reservations on these paragraphs by Mrs Jean Mann and Mr F. A. B. Preston (page 93).

be left simply to look after itself or be left on the basis of only a presumptive or provisional allocation of responsibility to the tenants occupying the individual flats in the blocks. [279]

Gardens

In relation to cottage development, gardens present little difficulty except where the houses are occupied by elderly or infirm people or by tenants who, through indolence or disinterest, take no steps to cultivate their gardens. [280]

In the former case we think special steps are necessary to ensure that houses for aging and infirm people are provided with gardens which can be maintained by the local authority, leaving sufficient ground for allocation to those tenants who are anxious and able to cultivate a plot of ground for themselves. [281]

To meet the latter difficulty local authorities normally make it a condition of tenancy that gardens are properly maintained, and they have their usual sanctions against breaches of such a condition. Ill-kept gardens are therefore purely a factorial or management problem and we do not need to make any further comment. [282]

There is, however, one general observation we should like to make on gardens associated with houses of the cottage type. In many cases we have found that the rigid application of density formulae has involved the allocation of excessive areas of garden ground to houses of this type. In general it is a mistake to provide larger gardens than are really required or than can be maintained by the tenant without the excessive expenditure of time and energy. Gardens should, wherever practicable, differ in size, so that account may be taken of the size of garden in allocating houses to particular tenants in accordance with their expressed preferences in this respect. This is, however, an ideal solution and the size of garden will rarely be the sole factor determining either allocation or choice. We, therefore, recommend that in suitable schemes and suitable areas additional ground should be available in the form of allotments for cultivation by those tenants who find their own individual gardens a little too small for their purposes. [283]

The allocation of garden ground to flatted houses presents some complexity and gives rise to all kinds of difficulties and even friction between tenants. Wherever possible, the gardens allocated to each house in the flatted block or blocks should be clearly delineated by the local authority and access should be arranged, so far as practicable, to take account of the allocation. We can suggest no neat solution of these

difficulties which seem to us to be inherent in flatted house development. In the last resort difficulties of this kind, when they reach acute proportions, can only be resolved by skilful and tactful management. There seems to be no reason why management should be artificially burdened with these problems and this is one of the many reasons why we feel that only exceptional circumstances should justify the large scale provision of houses of the flatted type. [284]

In large schemes of flats private gardens should give way to communal gardens maintained by the local authority and supervised by a resident caretaker on the model of so many schemes of this kind which we have visited. We have already emphasised that schemes of flats impose special responsibilities upon the local authority to ensure that the whole site is properly planned and disposed. The majority of tenants who elect to live in flats as a matter of choice are either unable or have no wish to cultivate a garden of their own, and accordingly if the space in and around the scheme is to be properly maintained this can only be done by the local authority. Such schemes should, however, include provision on a limited scale of allotments for the minority of tenants who will wish to have this facility and who have only elected to live in flats for some other reason, e.g. to be near their work or the like. This policy of reserving ground in estates of flats for cultivation as allotments has worked very well in some schemes which we have visited. [285]

Open Spaces

There is a clamant need in all types of development for open spaces to which all tenants, children, and the public generally may have access. Our evidence stresses that many schemes provided by local authorities in the inter-war years have been seriously deficient in these facilities. [286]

We lay special emphasis on the desirability of providing grass playing space for children in all kinds of schemes whether they comprise cottage houses, flatted houses or flats, although the need for this provision is clearly most acute in schemes of flats. Play space for children should be of reasonable size and should be suitably equipped. In the interests of the children's safety, the play space must be located near the home without at the same time being so small as to become untidy and difficult to equip, maintain and supervise. [287]

The provision of adequate playing space for children in schemes of flats is a paramount necessity and every scheme of flats should include

such facilities. Space so allocated should be properly laid out and equipped. It is particularly important that the space should be provided in that part of the scheme where the noise of playing children is likely to be least disturbing. [288]

It must be kept in mind also that grown-ups need their recreational facilities and that, therefore, there should be ample provision in the larger housing schemes for bowling greens, tennis courts, etc. This implies the closest possible co-operation between the housing authority and the authority responsible for these services, but the spontaneous growth of private bowling and tennis clubs and other sports clubs initiated by the tenants themselves should not be discouraged by the lack of adequate provision of suitable ground. [289]

The whole question of the most appropriate method of providing recreational open space is of such importance that we should like to recall with approval a recommendation of the Scottish Architectural Advisory Committee relating to the provision of open spaces in the layout of cottages and flatted houses:

"Far too frequently we see small open spaces fronted on all sides by streets. This not only detracts considerably from their usefulness for the purposes of children's playgrounds owing to the difficulty and danger of access for the young child, but results in a considerable wastage of money on roads, as the frontage to the open spaces is put to no real use. In this connection there seems to be a case for some fundamental change in the system of site planning, and we suggest that when the layout of new sites is being considered by local authorities, the possibility of providing ground for recreation purposes in large interior spaces between the houses rather than on road frontages should be fully explored. Access to spaces so arranged could quite well be provided by paths of tar macadam or other suitable material capable of taking an occasional cart or motor vehicle, but not primarily intended for wheeled traffic. By this method considerable saving in road costs would be effected, and the size, safety and quietude of recreation spaces much improved." [290]

Community services

The development of housing in the form of "neighbourhood units" or basic communities, capable of satisfying the fundamental needs of social life, will be dealt with in detail in a further report which we shall be submitting on the

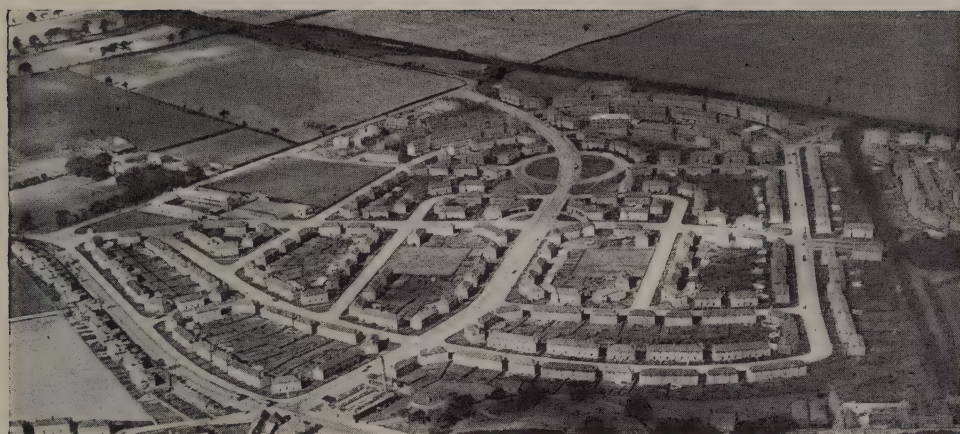
Distribution of Houses, and we content ourselves in this report with some observations on the main types of community facilities which fall to be considered in the preparation of layouts for housing estates. [291]

It is now widely appreciated that housing schemes and housing estates cannot be properly planned without regard to the provision of community facilities and more encouragement should be given by the Department of Health to local authorities to use their powers under the Housing Acts to provide community buildings in municipal housing schemes. [292]

We would emphasise that in all plans of projected housing development sites for such community buildings should be planned as an integral part of the scheme and that local housing and planning authorities should collaborate much more closely than they have done in the past, not only with one another but also with other local authorities responsible for different services, e.g. schools, libraries, etc., and with independent organisations such as the churches, commercial enterprises in relation to shopping and entertainment facilities, etc. The churches have a particularly important part to play in developing and fostering community life in new housing estates. We therefore recommend that housing authorities should pay special regard to the need for reserving land for churches, manses and equivalent premises, and ancillary buildings in their housing schemes and should consult with the local church authorities about the extent and siting of the land which they may require. Full account must also be taken in the planning of community services of the plans and programmes of the public health authority to provide health centres, clinics, day nurseries, etc. As a general principle, in every scheme of a size appropriate to carry community facilities of the types which we have described, the siting of the necessary buildings and services should be provisionally arranged as soon as the preliminary plan for the scheme as a whole has been drawn up, and space should be left in the plan for expansion of these facilities or for the addition of any new facilities which may be expected. [293]

These general observations apply to all housing estates irrespective of the type of development envisaged. In schemes of flats, however, additional communal services will very often be required. We have already suggested that communal laundries, with ancillary services such as communal ironing and drying rooms, are appropriate to certain types of flat development. These facilities should be planned in relation to the communal or social centre of such schemes of flats and be grouped together round such a centre. We think that such a centre might be

LAYOUT: I

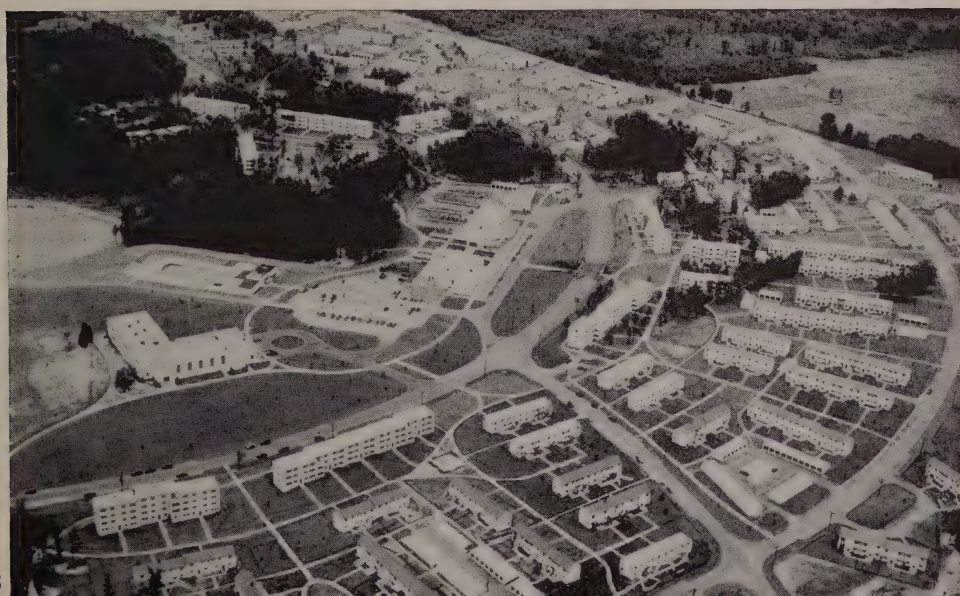


THESE three photographs illustrate three different methods of approach to the problem of layout.

(1)—is typical of many examples of suburban development in Scotland in the inter-war years. The new housing estate is bisected by two arterial roads while much of the costly road frontage is put to no real use; the short lengths of subsidiary streets are also much too wide for the traffic they have to carry.



(2)—an example taken from a famous English Garden City—while not without faults, shows more ingenuity and variety. The cul-de-sac, the recessed crescent, the recessed open forecourt, etc., are all used to good effect. These devices make for greater privacy, greater safety for children and greater economies in road costs. The variety in the lengths and siting of blocks are detailed features to be noted.



(3)—an aerial view of the new community of Greenbelt, Maryland, U.S.A.—illustrates principles of site planning not so far developed in this country but foreshadowed by a Scottish report published in 1935. Approach to houses is by pathway and service roads and the spaces between blocks are open parkways. The variety in types of houses—flats and cottages—the wealth of open space, the tree planting and the community buildings in the background are other notable features.

LAYOUT: II



THE recessed open forecourt (top left), the recessed crescent (top right) and the cul-de-sac are all features which properly utilised can contribute to the amenity and privacy of housing schemes and provide attractive variations in layout.



LAYOUT : III

ORNAMENTAL margins to roads and streets in housing schemes enable the houses to be set back and in appropriate circumstances set at right angles to the main road and approached by footpath only. These features, used with discretion, can do much to make our new housing estates more attractive.



LAYOUT OF FLATS: I



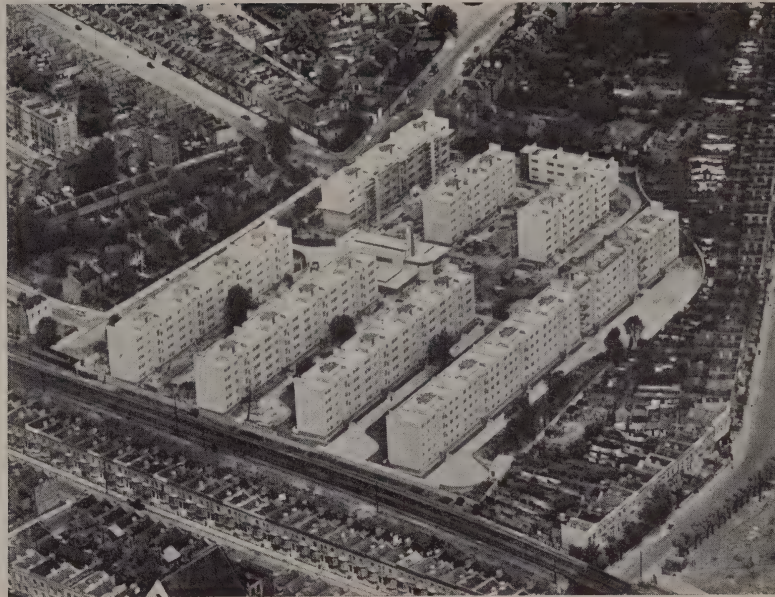
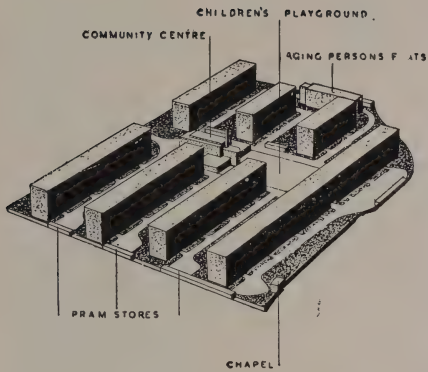
WE have much to learn in the layout of modern flats.

The artificiality of building blocks of flats in imposing façades without taking thought of the "back greens" and "back courts" behind the blocks is well illustrated in the views (top) of the front and back of a recent scheme of tenement flats.

The ribbon building of flats on main roads, especially arterial roads carrying heavy traffic, is another fault to be avoided (centre).

—On the other hand, we must also be careful not to build blocks of flats in vast garrisons or colonies like these with no proper social focus.

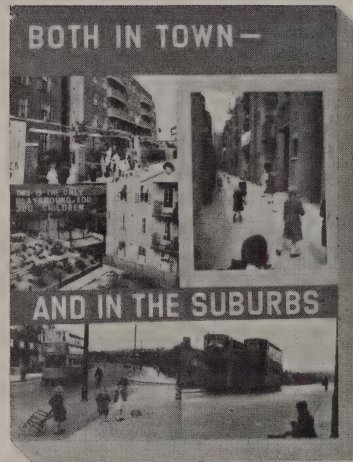
LAYOUT OF FLATS : II



It will be seen from the key that the scheme of 400 modern working-class flats illustrated above is properly grouped as a residential unit with its community centre, including communal drying room and other facilities, children's play space, pram stores, separate block of flats for aging persons, etc. In the best examples of modern flat development, the blocks are sited in parallel, with the living quarters in all flats planned to obtain the maximum sunshine and the spaces between blocks planted and properly maintained as communal gardens; the blocks are designed to be equally attractive both from the back and front views (below).



OPEN SPACES



“THERE is a clamant need in all types of development for open spaces to which . . . children . . . may have access.”

CHILDREN'S play spaces should be planned for in all our new housing schemes and particularly in new schemes of flats. They should be near the home and should be suitably equipped.



AMENITIES : I

SCREEN WALLS

at corner sites and between blocks can contribute effectively to the improvement of architectural design.



FOOTPATHS should be properly paved either in concrete or paving slabs and provided with low-set railings or concrete kerbs.



FENCES : In many areas the removal of railings during the war has improved the appearance of our housing schemes. These photographs illustrate the value of deliberately omitting fences and railings and providing either a fringe of trees and shrubs or low-set kerbs.



AMENITIES : II



“**N**OTHING enhances the attractiveness of the layout of housing estates so effectively and economically as the judicious planting of trees and shrubs and the retention of trees which are already established.”



provided with club rooms for the younger people and a small hall where meetings could be arranged and suitable instructional films shown. [294]

* We are much impressed with the evidence which we have received to the effect that insufficient attention is paid to the location of housing schemes in rural areas in such a way as to foster rural community life. We agree that much more positive action in this direction must be taken in the future than has been taken in the past. In particular, we think that future housing development in smaller towns and villages in rural areas must be directly related to the existing community and that the question of re-developing the derelict areas of some of the smaller towns and villages in Scotland is of paramount importance in this connection. [295]

Amenity—some special features

PATHS Entrance and garden paths can, if they are properly designed and provided with an attractive and durable surface finish, contribute substantially to the amenity of the layout. We therefore recommend that in all cases such paths should be finished in concrete or paving slabs and provided with concrete kerbs. The ash paths provided in so many housing schemes in the inter-war years often give these schemes a drab and neglected appearance. One further point of detail on this question should perhaps be mentioned. Some authorities have provided access paths at the rear of terraced blocks in close proximity to the houses. This arrangement disturbs the privacy of each house and has given rise to numerous difficulties; we do not therefore commend it. Access paths in such cases should always be located, in our opinion, at the foot of the back garden plots. [296]

FENCES Even before the exigencies of war necessitated the removal of metal fences and gates, some local authorities in Scotland had dispensed with railings and had provided low-set concrete walls or kerbs which greatly enhanced the attractiveness of the layout. The improvement in appearance which has resulted in many schemes following upon the removal of metal railings during the war has been a matter of frequent comment, and in future schemes fences and gates might be dispensed with in appropriate areas and concrete kerbs on the model which we have just mentioned might be substituted. We realise, of course, that this is a question which each local authority will have to determine at its own discretion in the light of

local circumstances. We are not oblivious of the fact that fences and gates may be essential in some areas. [297]

TREES Nothing enhances the attractiveness of the layout of housing estates so effectively and so economically as the retention of trees which are already established and the judicious planting of flowering trees and shrubs. It is only too common to find many schemes and housing estates which are completely featureless and bare without these amenities. The value of tree planting is best illustrated in those schemes in which the trees as they mature have in turn given a maturity and character to the whole layout which clearly could not have been secured in any other way. [298]

CORNER SITES The treatment of corner sites in housing schemes requires special care. In many schemes the houses are so disposed on corner sites as to leave exposed an incongruous array of clothes-poles, pipes, etc., and to disturb, if not to destroy, the privacy of the gardens associated with the houses contained in the block or terrace as a whole. We agree, therefore, with the Scottish Architectural Advisory Committee that at corner sites particularly more use should be made of screen walls between blocks which, quite apart from their practical advantages, can contribute effectively to the improvement of architectural design. [299]

GARAGES Much of our evidence suggests that garage accommodation should be provided in future housing schemes for two main reasons. Firstly, the possibility of the production of motor cars and motor cycles being expanded to cater for a larger proportion of the population must be envisaged, and secondly, even in present conditions many tenants of local authority houses require or desire to keep motor cars. We have found that several local authorities in England do in fact provide lock-up garages as an integral part of their housing schemes. The garages are built by the local authority and independently rented to those tenants who require these facilities. The buildings are designed and planned in harmony with the scheme and are usually grouped together. This is, of course, a question for the individual local authority to determine in the first instance in relation to the size of the particular scheme, but in appropriate circumstances they should not be discouraged from making this provision where they think it necessary and where there is real evidence that the facilities would be used and that the garages would be let at economic rents. [300]

MISCELLANEOUS We would emphasise that the careful designing and proportioning of

* See dissentient memorandum by Mrs Jean Mann (page 95).

"street furniture"—as it is sometimes called—that is, lamp standards, traffic signs, street nameplates, etc., can contribute substantially to the improvement of the amenity of housing schemes, and the choice of suitable designs, materials, colour and the like should be given special consideration by local housing authorities. One point deserves special mention—where provision is made for aging persons in housing schemes, seats or shelters should also be provided where appropriate in sheltered and quiet positions in the scheme. Indeed a more generous provision of seats and small shelters generally in housing schemes would, we think, be appreciated. [301]

Planning the community

Modern traffic conditions, taken in conjunction with the increasing demand for recreational facilities, open spaces and all kinds of community buildings, demand a complete reconsideration of the basic principles of housing layout. In its widest aspects this whole question is one of town planning, but for the purposes of this report we think it may be useful to summarise briefly the main principles which should be borne in mind in determining the location and types of layout appropriate to future housing schemes.

(1) The planning of new housing, whether on new or redeveloped sites, should be considered as an integral part of the planning of the whole community and not as an isolated development. [302]

(2) Housing sites should occupy land which under a planning scheme would properly be zoned for residential purposes. This implies areas free from heavy industrial premises, residual industrial works, such as coal bings, etc. [303]

(3) Housing sites should be selected in such a

way as to enable subsequent development to take a community form either by itself on "neighbourhood unit" principles or linked with existing developments, depending upon the size of the whole community; that is to say, small isolated blocks of houses separated from the main community should be avoided. [304]

(4) Housing sites should be free from main road traffic: sufficient linkage should be provided for service vehicles to and from the residential areas and the necessary service roadways should be so designed as to discourage the use of these roads by local through traffic. [305]

(5) The planning of residential zones should take into consideration at the earliest stage the probable routing of public service vehicles. Cases may be cited where, when this was not done, public service vehicles had of necessity subsequently to penetrate through roads never designed to take such vehicles, to the obvious detriment of the roads themselves and the amenity of the residential district. [306]

(6) Open spaces for all necessary purposes should be planned as part of the residential zone or neighbourhood unit. [307]

(7) Provision should be made for all services ancillary to housing, e.g. schools of various kinds, shops, churches, service industries, etc., keeping in view the fact that, with an increase in leisure, the need for community buildings is likely to increase in the future. [308]

(8) The appropriate size of site to be earmarked for residential zones is closely linked with the type of facilities to be provided within the zone. This in turn will obviously depend upon the total size of the community. Whatever the size of the community as a whole, however, it is essential from the planning point of view that housing and public facilities of all kinds appropriate to that community should be planned as a whole, keeping in mind the possibility of future growth. [309]

*Chapter VIII: IMMEDIATE POST-WAR PROBLEMS

THE immediate post-war years will present special problems which seem to us to be capable of being considered separately from questions of long-term post-war housing policy. These problems can be classified in three main categories:

(a) the specially urgent post-war demands for housing accommodation principally arising from marriages immediately before and during the war and from other causes and gravely accentuated by the diminution in output of new houses during the war;

(b) the shortage of skilled building labour immediately after the war; and

(c) building costs in the immediate post-war years. [310]

(a) Specially urgent post-war demands

It is widely appreciated that immediately after the war specially urgent demands for housing accommodation will arise which are capable of broad classification as follows:

(i) houses required to replace houses destroyed during the war by enemy action;

(ii) houses required for (a) couples who were married before the war and for whom separate housing accommodation has not yet been made available and (b) couples who have married during the war and who will wish to set up house for themselves immediately the war is over;

(iii) houses required to meet the needs of new industry or possible transfers of industry from one area to another. [311]

We have described these demands as specially urgent in the sense that they arise from the needs of families who have no homes of their own. To that extent their needs are capable of being distinguished from the needs of families who are living in unfit or overcrowded conditions

but have houses of their own however inadequate.

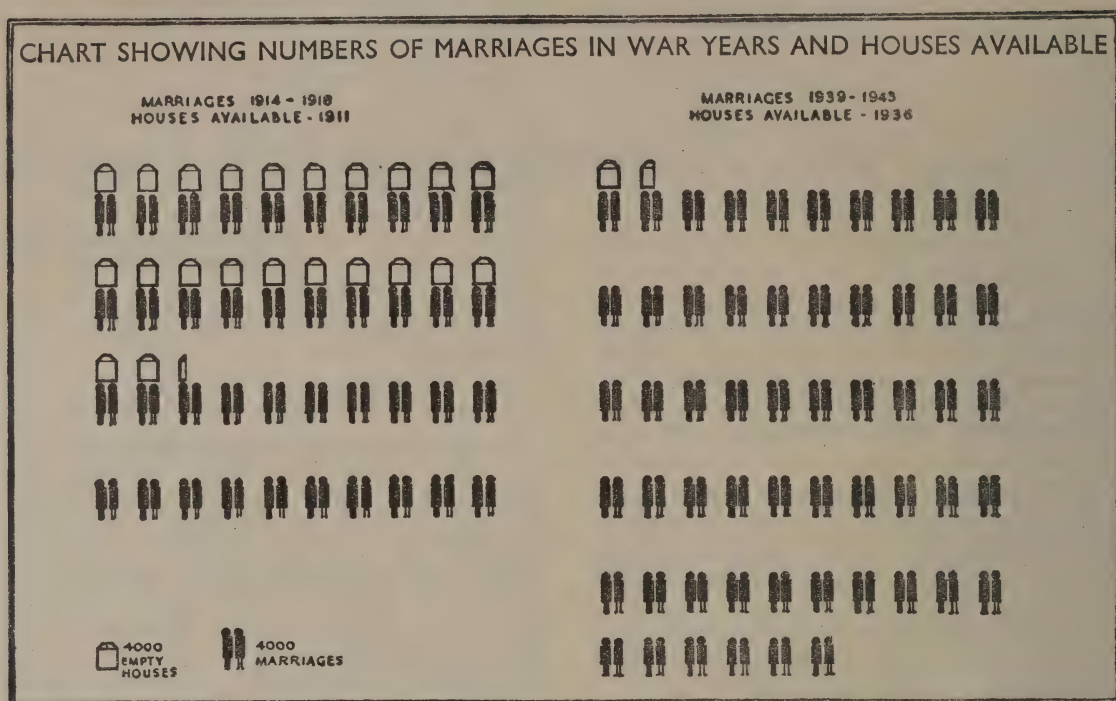
The following is a brief analysis of the problems which will arise under each category:

(i) The number of houses totally destroyed by enemy action in Scotland since the war began is about 7,000. The bulk of this damage was concentrated in Clydebank, Greenock, Glasgow, and Aberdeen, and the most serious demand for replacement arises in Clydebank where 4,105 out of 12,000 houses have been totally destroyed and where overcrowded houses before the war comprised 40 per cent. of the total houses in the burgh. In the four places mentioned the total number of houses requiring replacement is 6,175 or 89 per cent. of the total number of such houses in Scotland as a whole. [312]

(ii) (a) It is impossible to estimate precisely the numbers of families created by pre-war marriages who are still without independent housing accommodation. The Census Returns for 1931—the latest date for which complete figures are available—showed that in that year 23,477 houses were occupied by two or more families; between 1931 and 1935, when the overcrowding survey was taken, the number of houses in “dual occupancy” in Glasgow and Edinburgh rose from 7,418 to 9,320, an increase of 26 per cent. Having regard to the comparatively high marriage rate in the years before the war, it is safe to assume that the number of houses in “dual occupancy” in Scotland in 1939 was at least 30,000. [313]

(b) Since 1939 and down to the end of June 1943, the total number of marriages which have taken place in Scotland is 214,068 and the number of marriages annually in each of the years 1939–1942 has been about 14,000 higher than the annual pre-war average. It is estimated that about 20,000 houses annually in Scotland become available for new families as a result of the dissolution of existing families by death or other causes making about 90,000 houses so made available for the years 1939 to June 1943. On this assumption, over the four-year period the accumulated arrears of housing accommoda-

* See reservations on this chapter by Mr F. A. B. Preston (page 94).



tion which will have to be found for persons who have married during the war will be 124,000 new houses. It is, of course, true that not all couples who have been married in Scotland during the period reviewed will ultimately be domiciled here but it is suggested that the number who will not will be more than offset by those who have married outwith Scotland and will wish to set up house on their return to this country. [314]

The demand under this category is much more acute than the corresponding demand at the end of the last war, for two reasons. In the first place, the number of marriages is very much greater—195,054 for the four complete years 1939–1942 as compared with 135,101 for the years 1914–1917. In the second place, prior to the last war there was actually a fairly substantial surplus of houses over families in Scotland. The census returns for 1911 show that in that year there were 89,060 vacant houses in Scotland. In Glasgow, for example, in 1913, and this is typical of the country as a whole, there were 18,710 vacant houses. By 1921 this number had diminished to 143 and this drop in the number of empty houses throughout the period of the last war was common to the country as a whole. Prior to the present war, on the other hand, the number of empty houses in Scotland was extremely small. Out of 1,024,000 houses surveyed for the purpose of the overcrowding survey in 1935, only 6,700 or 0.65 per cent. were found to be empty and these

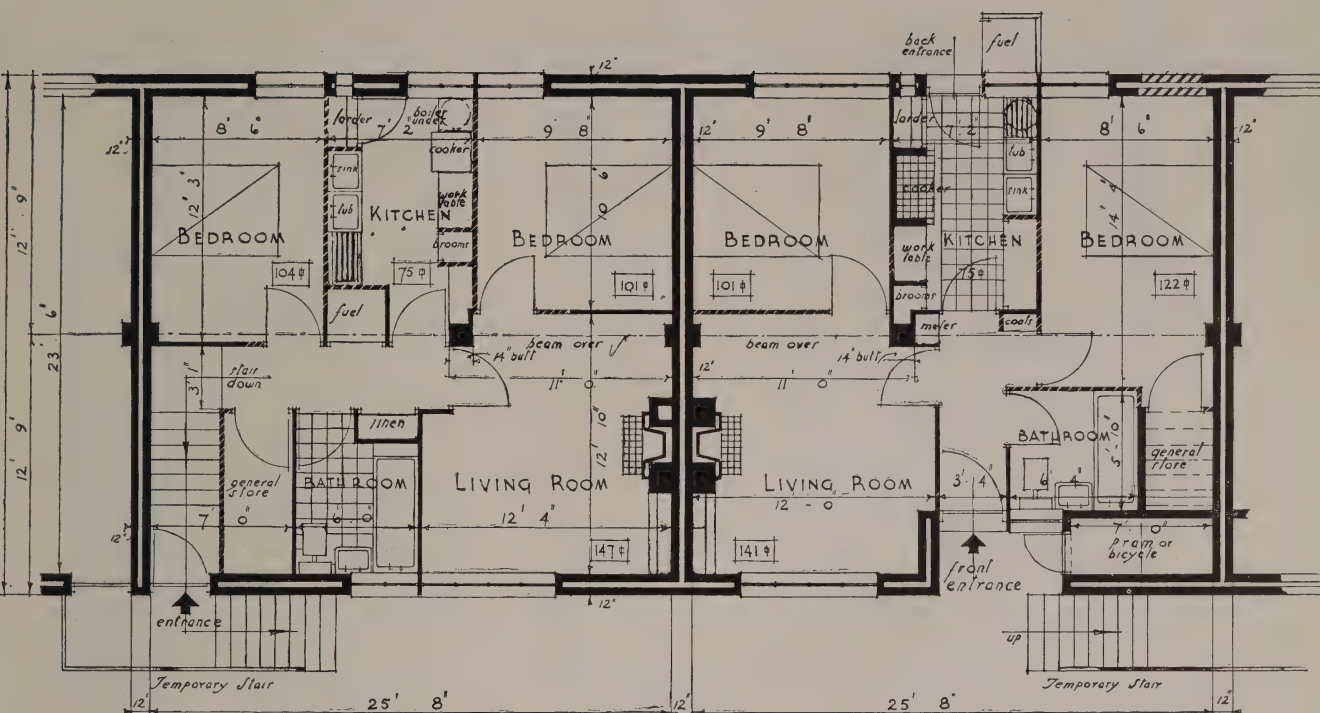
included houses that were only temporarily unoccupied. Again, in 1939 the number of unoccupied houses in Glasgow, and this figure includes large houses not suitable for normal family occupation, was only 745 out of a total number of houses in the city of over 280,000. In brief, during this war housing accommodation has been so scarce that there has been no “slack” to be taken up to satisfy the needs of war-time marriages and accordingly the position when this war is over will be very much more acute than it was at the end of the last war. [315]

(iii) It is quite impossible to predict at present the various industrial changes which may take place in the immediate post-war period and which may give rise to specially urgent demands for housing accommodation. Purely for the purposes of this report, however, a figure of 5,000 houses has been taken to be an approximate need, a need related primarily to the possibility that certain large war-time establishments which at present draw much of their labour from considerable distances will be maintained after the war and will require for their proper peace-time functioning a pool of housing accommodation in or near the districts in which they are located. [316]

To sum up, the total number of houses in these three categories which will be required as a matter of very great urgency immediately after the war amounts to about 166,000. This figure will, of course, be increased the longer the war lasts, if the present high war-time

THE DUPLEX HOUSE

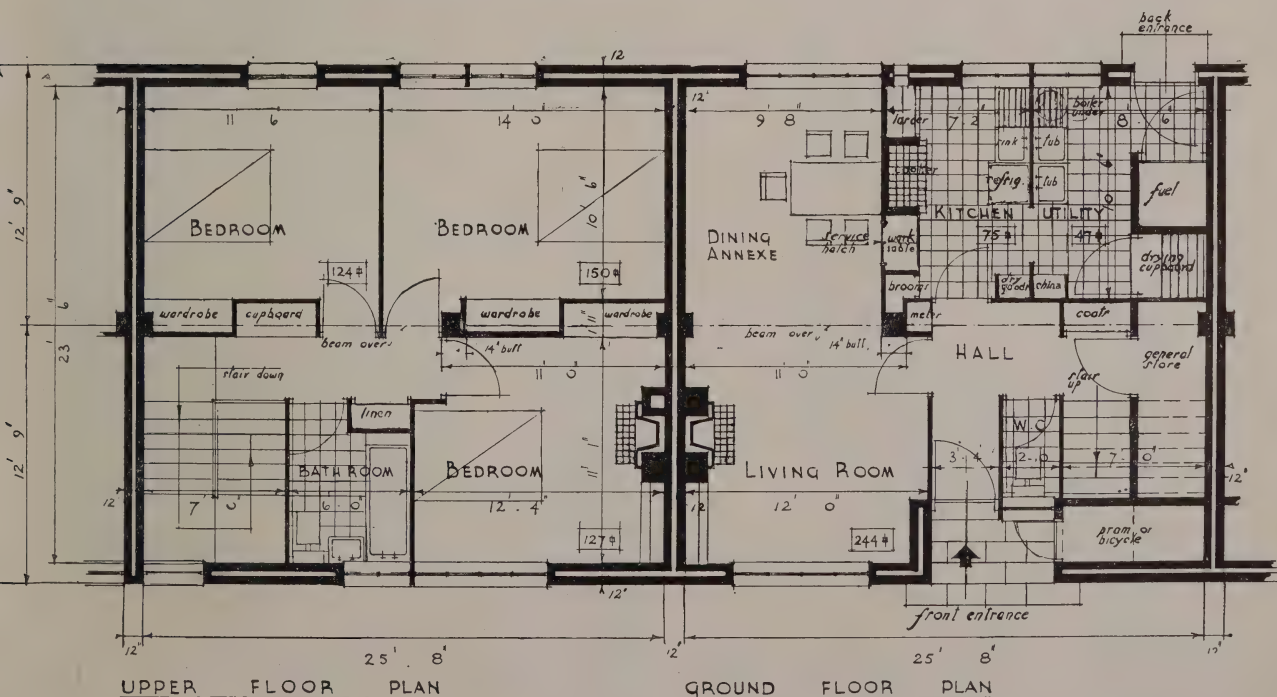
SHORT TERM—STAGE 1:
4 3-APARTMENT DWELLINGS



UPPER FLOOR PLAN

GROUND FLOOR PLAN

-  INDICATES TEMPORARY PARTITIONS - STAGE 1.
-  INDICATES PERMANENT WALLS & PARTITIONS - STAGES 1 & 2.



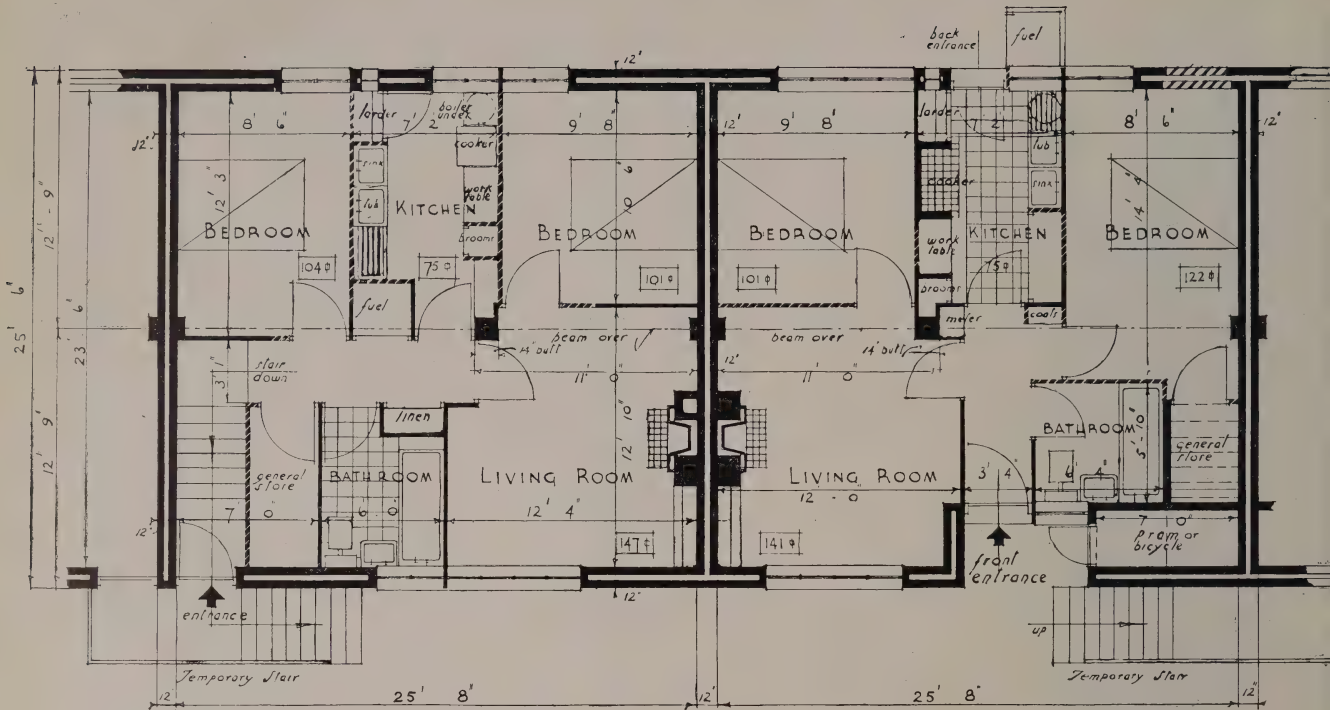
UPPER FLOOR PLAN

GROUND FLOOR PLAN

LONG TERM—STAGE 2:
2 4-APARTMENT DWELLINGS

THE DUPLEX HOUSE

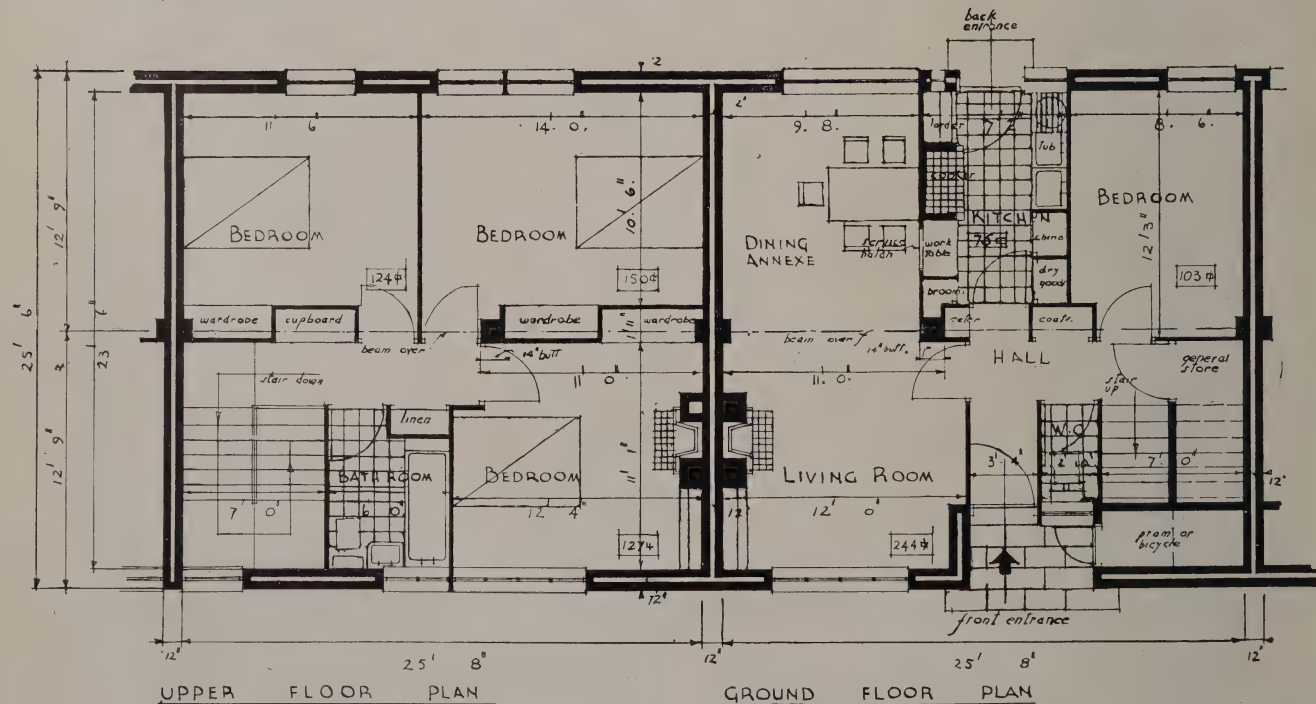
SHORT TERM — STAGE 1:
4 3-APARTMENT DWELLINGS



UPPER FLOOR PLAN

GROUND FLOOR PLAN

-  INDICATES TEMPORARY PARTITIONS - STAGE 1
-  INDICATES PERMANENT WALLS & PARTITIONS - STAGES 1 & 2.



UPPER FLOOR PLAN

GROUND FLOOR PLAN

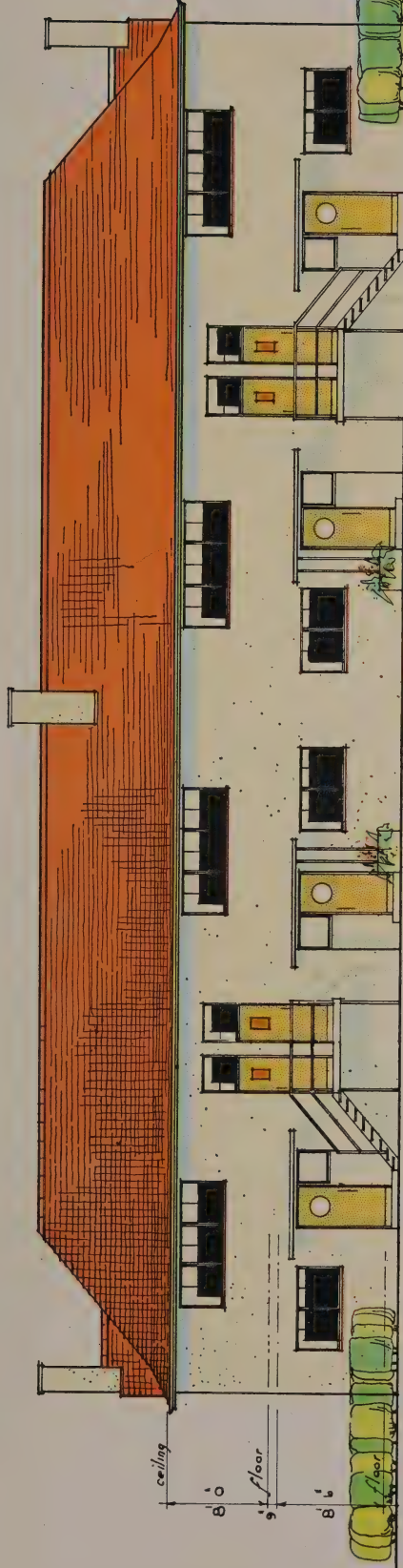


LONG TERM — STAGE 2:
2 5-APARTMENT DWELLINGS

THE DUPLEX HOUSE

Plate XXXIII

Short Term—Stage 1:
8 3-Apartment Dwellings



ENTRANCE ELEVATION



ENTRANCE ELEVATION

Long Term—Stage 2:
4 4-Apartment Dwellings



marriage rate is maintained and if it continues to be impossible to embark on a large-scale house-building programme during the war. [317

The magnitude of this problem is thrown into relief by the history of the measures taken to expand the output of houses in corresponding circumstances at the end of the last war. Despite the ambitious plans for providing housing accommodation at the end of the last war, especially to meet needs arising from war-time marriages, progress in house construction was very slow, as the following figures of houses completed in Scotland between 1918 and 1924 indicate:

End of 1919	Nil
1920	957
1921	5,579
1922	10,472
1923	6,618
1924	4,388

making a total including 5,068 private enterprise unsubsidised houses built in the same period of 33,082, and it was not until 1933 that the number of new houses reached the total of 166,000 given in the last paragraph. These houses were, of course, built to comparatively high standards and no special steps were taken to provide on a large scale anything which might be regarded as "sub-standard" emergency housing accommodation. Such reductions in standards as did take place in 1923 were dictated primarily by a desire to reduce the high building costs which prevailed in 1921-22. [318

Before proceeding to give our own recommendations for dealing with the immediate post-war problem we think it might be useful if we included in this report a note of the experience of the United States Government in meeting similar large-scale demands for housing accommodation created by the Defense Program in the United States. This programme involved the establishment of a number of new factories in areas remote from existing townships and substantial extensions to existing plants. The expansion and the large-scale transference of industrial population which it involved and the resultant demands for new housing accommodation were of a magnitude with which we are unfamiliar in this country. To take only one example, extensions to the factory of the Consolidated Aircraft Company and other plants at San Diego, California, resulted in the influx of over 100,000 people in about 18 months and an increase in the population of the town, which was originally a little larger than Aberdeen or Dundee, from 203,000 to over 300,000 in that period. The same phenomenon occurred in other war production centres in the United States during this period and necessitated the Federal and State Authorities providing

housing accommodation for over one million people in about 350,000 houses during the year September 1941 to August 1942. [319

The majority of these houses were provided as a result of direct action by the various Federal Housing Agencies of the United States Government in close co-operation with the State and Local Housing Authorities. The main standards of construction, accommodation, equipment, planning, and design of the houses built under the programme were laid down by the Federal Housing Agencies and incorporated in a series of "standard plans" prepared by them. The Federal Authority insisted on compliance with these standard plans to ensure speed in building, effective control of priority materials and as a check on price inflation. The standard plans incorporated the following minimum standards of accommodation (these standards apply to houses designed to accommodate two persons and the proportionate increases for larger sizes are indicated):

Living-room.	160 sq. ft. (with an additional 10 sq. ft. for each additional person).
Kitchen	Exclusive of utility room—50 sq. ft. (with an additional 10 sq. ft. for each additional person).
Principal bedroom.	120 sq. ft.
Additional two-person bedrooms	100 sq. ft. (additional one-person bedrooms—70 sq. ft.).

[320

The standard plans of "family dwellings" were mostly of the two- and three-bedroom type and generally provided for a dining recess in addition to the living-room, a utility room, linen cupboard, built-in cupboard accommodation including built-in wardrobes in bedrooms, and other built-in fittings. They also provided for built-in refrigerators and air space heating on the lines we have described in paragraph 122. A controlled "ceiling price" of 6,000 dollars per house was imposed on all houses to be built under the programme to the standard plans prescribed, and the Federal Authorities also laid down controlled prices for the building materials, equipment and finishings required for the houses. To secure the most effective use of priority materials and to control costs increasing use came to be made by the Federal Authorities of bulk purchase machinery, under which large orders were placed centrally for the building components and equipment required. [321

These administrative arrangements were very

successful in limiting the prices of the houses built under the programme at a time when inflation of such prices might have been expected. The rise in costs of construction of houses built under the programme, for example, in 1942 was limited to about 4 per cent. and the average cost of all houses built down to the end of 1942 was 4,250 dollars. The average rental of the houses was between 35 and 40 dollars per month. For the purposes of comparison with costs of building in this country we should mention that the average working-class home in America prior to the war cost about 5,000 to 6,000 dollars to build and that the average working-class rental was between 350 and 500 dollars per annum. [322]

Houses built under the programme were divided into three categories:

(a) *Permanent houses*—established in those districts where it was expected that the need for housing accommodation created by war conditions would continue in the post-war period.

(b) *Demountable houses*—located in those areas where housing accommodation on the same scale would not continue to be required after the war but from which the need was likely to shift to adjacent areas. Houses in this category were accordingly capable of being taken down and transported for re-assembly elsewhere.

(c) *Temporary housing*—designed to meet a purely transient need and consisting chiefly of caravan accommodation for seasonal workers and for workers engaged on site works and the actual construction of factories and dwelling accommodation.

In both types (a) and (b) prefabrication of house sections—principally in timber—components and fittings was extensively employed and resulted in a substantial increase in the tempo of building. In one typical scheme, 3,000 houses, providing accommodation for about 10,000 transferred war workers and their families, were completed in 220 days from the commencement of work on the site. [323]

The administrative and technical arrangements adopted for the purposes of this programme warrant careful study in relation to the tremendous problems with which we shall be faced in this country after the war. [324]

(b) Shortage of Skilled Building Labour

It is widely known that the building labour force in Scotland has been substantially diminished during the war. The total number of building craftsmen in Scotland immediately

before the war was about 60,000 and this number will have been reduced to about 25,000 by December 1943. The majority of craftsmen left in the industry at the end of the war will be principally engaged immediately after the war on essential maintenance work. In the first place it will be of vital importance that essential buildings in general and house property in particular should be maintained in a fit state, especially having regard to the tremendous arrears of maintenance work which have accumulated during the war. Secondly, the building labour force is by the very character of the work it performs widely distributed throughout the country and much of its strength is made up of craftsmen employed by small firms or working on their own account on jobbing repairs and maintenance work and not organised or suited either by training or experience for work of new construction. For both these reasons it is undesirable and impracticable to reduce the maintenance force below an essential minimum figure. In these circumstances the building labour force likely to be available for new house building immediately at the end of the war will be very small in proportion to the magnitude of the demand for housing accommodation which we have just outlined. [325]

We are aware that the Government have certain measures in contemplation for the post-war expansion of the building labour force. These are outlined in the White Paper on Training for the Building Industry (Command 6428), which envisages special arrangements for the training of 200,000 additional craftsmen for the building industry throughout Great Britain as a whole over a period of 3 to 4 years after the conclusion of hostilities. These measures of expansion are of vital importance to the Scottish post-war house-building programme and we hope that the policy outlined in the White Paper will be energetically and vigorously applied in Scotland. As we have said, the total basic need for new housing accommodation in Scotland amounts to 500,000 houses and a programme of new building to meet this need spread over even as long a period as 10 years would involve an average annual output of 50,000 houses per year. This output is twice as high as the peak annual output attained in any year before the war and will involve the employment on new house construction alone of about 36,250 craftsmen, a larger number than the total number of craftsmen which will be left in the industry for all purposes at the end of the war. In these circumstances it is clear that the measures for expanding the number of building craftsmen in the industry after the war will require special consideration in relation to the Scottish post-war house building programme. [326]

Despite all the measures in contemplation, however, for the post-war expansion of the building labour force, it is quite clear that it will be impossible to provide by normal building methods within a short space of time immediately after the cessation of hostilities, houses up to the numbers and with the speed required. We have therefore felt bound to suggest the following classification of the types of housing accommodation which might be provided in the immediate post-war period and which are designed to make the utmost use of the limited resources of skilled building labour which will be available.

(i) Transitional accommodation designed for purely temporary occupation.

(ii) Accommodation capable of being converted or upgraded to improved standards when circumstances permit.

(iii) Accommodation capable of being provided by alternative methods of construction.

(iv) Accommodation provided by normal methods of building.

[327]

(i) Transitional Accommodation

We are clear that some form of accommodation designed to be provided with the maximum possible speed for temporary occupation will be required if the specially urgent post-war demands which we have outlined are to be satisfied. We have examined in this connection various proposals for the adaptation of buildings provided during the war for essential war purposes, and we have come to the conclusion that, subject to proper safeguards, structures of a suitable type can be converted into temporary housing accommodation. If this expedient is adopted the following standards of room areas should be aimed at:

Living-room . . .	160-180 square feet.
First bedroom . . .	130 square feet.
Second, third, etc., bedrooms . . .	100-120 square feet.
Kitchenette . . .	70 square feet. [328]

These standards, which represent minimum standards, are based on suggested methods of converting war-time buildings. We feel, however, that the whole question of "transitional houses" should be independently examined, and we have requested the Burt Committee to give urgent consideration to the possible production of a type of prefabricated, and preferably demountable, dwelling designed from the outset to provide housing accommodation as opposed to merely converted accommodation. We have also asked the Burt Committee, in the event of

their finding it impossible to devise a method of construction to secure this result, to suggest the most expeditious method of converting war-time buildings for housing purposes on the lines of the plans which we have considered and which are incorporated in this report. [329]

(ii) Accommodation capable of being converted or upgraded

The proposal which we have just suggested for the conversion of existing war-time buildings is likely to be a valuable expedient in the immediate post-war period in view of the fact that a substantial number of these buildings will be already available and in some cases will be suitable for conversion into housing accommodation without being removed from the sites on which they are at present located. We understand that a survey of existing war-time structures is being carried out with this in view. The proportion of such buildings is, however, likely to be small in relation to the magnitude of the need which we have outlined. Moreover, we fully appreciate that the conversion or provision of housing accommodation of this type involves the installation of services and other site works, a proportion of which at least will be uneconomic in that such services, etc., will be unsuitable for permanent housing. We have, therefore, felt bound to consider alternative proposals to supplement the contribution which can be made by "transitional houses." We suggest that the most careful consideration should be given to the possibility of providing accommodation on what we describe for convenience as the *duplex* principle. By this we mean that a proportion of the houses to be built in permanent construction on their final sites should be so designed that in the immediate post-war period they can accommodate two families and can subsequently be converted into single family houses which will conform to the higher standards of planning and conveniences recommended in this report. We incorporate in the report two typical plans (Plates XXXI-XXXIII) of houses designed in this way: [330]

(a) A five-apartment two-storey cottage house suitable for terraced or semi-detached development, ultimately designed to comprise a living-room (with dining annexe), 4 bedrooms (or 3 bedrooms and a parlour), bathroom and kitchen, but, as initially constructed, to comprise two 3-apartment houses, one on each floor, each house containing a living-room, 2 bedrooms, a kitchen and a bathroom, and having an area of 583 square feet; [331]

(b) A four-apartment two-storey cottage house again designed for terraced or semi-

detached development, ultimately to comprise a living-room (with dining annexe), a kitchen with separate utility room, 3 bedrooms, a bathroom and an additional w.c. apartment on the ground floor, but, as initially constructed, comprising two 3-apartment houses, one on each floor, each with a living-room, 2 bedrooms, bathroom and kitchen. [332]

This proposal has the advantage that, in standards of construction, design, and appearance, the *duplex house* conforms to the standards of other permanent houses likely to be built at the same time and does not involve uneconomic expenditure on main services, roads, etc. The actual process of conversion would merely involve the removal or reinstatement in new positions of certain fittings and conveniences. It is, of course, true that the prospect of conversion depends upon the speed with which permanent houses of other types can be made available but the termination of the effective life of converted war-time buildings depends on precisely the same factor. [333]

(iii) Accommodation provided by alternative building methods

As we have already explained, the Burt Committee are engaged upon an examination of alternative methods of building which will utilise alternative forms of materials and alternative types of labour for the purposes of the post-war housing programme. We are not competent to deal with this question and we have no special observations to offer pending the Burt Committee's report, except that we assume that houses built by alternative methods of construction will conform to the standards of accommodation, equipment, etc., adopted for houses built by normal methods. [334]

(iv) Accommodation provided by normal methods

It is contemplated that traditional materials and traditional building skill will be deployed to the utmost on the building of houses in the immediate post-war years. In the light of the statistics we have given, however, we must envisage the possibility that it may be impracticable, if the resources of the industry are to be utilised to maximum advantage, to give immediate effect to the standards of planning, design and equipment recommended for long-term housing policy in the earlier chapters of this report. We have therefore prepared for suggested adoption in the immediate post-war years, model plans of houses which are based as regards over-all areas on the average pre-war areas of corresponding types but which incor-

porate such improvements in the form of increased cupboard accommodation, etc., as can be included within these areas. The main improvements which we have felt able to suggest relate to additional cupboard accommodation to the following standard:

Kitchen	{ Larder. Broom Cupboard. Drying Cupboard.
Living-room	One built-in cupboard.
Bedrooms	Built-in hanging cupboard space sufficient for two persons in each bedroom.
General	{ Fuel storage cupboard — sufficient to hold at least 10 cwt. of coal. Linen cupboard.

[335]

We have not found it practicable to provide in each case accommodation for a pram, bicycle or garden tools within the areas specified, nor have we made provision for kitchen equipment on the full scale recommended in Chapter V. Nor has it been possible to provide for the minimum areas of bedrooms or the separation of cooking and washing facilities and dining space recommended in Chapter III of this report. [336]

We wish in conclusion to give the following general observations on the first of the categories of housing accommodation described in the preceding paragraphs.

It is our firm opinion that what we have called "transitional houses" should provide all the essential equipment and conveniences which are available in other forms of housing provided in the immediate post-war period; that is, each dwelling should have hot and cold water supply, separate sanitary conveniences, essential cupboard accommodation as provided in our immediate post-war plans, etc. The absence of these facilities in such houses would produce grave dissatisfaction on the part of those tenants who had been allocated "transitional" and not "permanent" houses and would have serious effects on rent levels. If the rents of temporary accommodation were artificially depressed in this way it might be very difficult to secure that the houses would be vacated by the tenants even when permanent housing accommodation at higher rent levels was available. [337]

It must also be borne in mind that even with an output of 50,000 houses per annum, it will take 10 years to clear off the current housing "overdraft" of 500,000 houses which does not take account of the additional numbers of houses required each year due to wastage of existing houses and the needs arising from marriages while the programme of building is going on. In these circumstances it can be safely assumed

that transitional housing accommodation is likely to be occupied, not necessarily by the same tenants, for a period of at least 15 years. Public opinion would probably not be disposed to tolerate the existence of temporary dwellings for this length of time unless these dwellings provided equivalent standards of accommodation, if not equivalent standards of construction, to those available in permanent dwellings. [338]

If transitional housing accommodation on the lines we recommend is provided we should like administrative arrangements made to ensure that occupation of such accommodation was strictly temporary. By this we mean that local authorities should arrange for such dwellings to be occupied for a limited "waiting period" while permanent homes are being built. In brief, transitional houses should be used as "clearing" accommodation for families who are in process of being rehoused or as "interim" accommodation for families who are setting up house for the first time. [339]

(c) Costs in the immediate post-war period

We are all familiar with the effect of high building costs on the ambitious housing programme planned at the end of the last Great War. The majority of houses built by local authorities in Scotland in 1920-21 cost over £1,000 per house, and these inflated prices were only broken by the almost complete suspension in 1921 of the approval of new housing contracts. In face of the tremendous demands for housing accommodation which will arise immediately after the present war, it is impossible to contemplate a similar recession in house building. Moreover, in view of the magnitude of the post-war house building programme and the effect which this programme can and must have in the restoration of normal employment, not only in the building industry but in many inter-related fields, inflated building costs would have repercussions extending far beyond the housing programme alone and would have a profound effect upon economic conditions in general in Scotland. The question of building costs in the immediate post-war period will therefore assume paramount importance. [340]

We have already suggested that in view of the shortage of skilled building labour in the immediate post-war period, it may be impracticable to give effect immediately after the war to the long-term standards of planning, etc. recommended in this report and we have, therefore, framed short-term plans which we suggest might be adopted as an interim measure immediately

after the war. In preparing these plans, and particularly in taking the average pre-war over-all areas as our standard, we had also in mind the special difficulties of building costs which may arise in the immediate post-war period; we have not been oblivious of the difficulty of introducing higher standards of accommodation, planning and equipment at a time when building costs may be at a high level. At the same time, however, we sincerely hope that parallel with any necessary postponement of the introduction of improved standards which may be involved on this account, firm measures will be taken to control the post-war building programme as a whole so that building labour and building materials will be concentrated on essential needs, among which, in our opinion, house building in Scotland must take first priority. All our evidence is unanimous in expressing its desire for improved housing standards. In the light of this evidence, we have formulated recommendations for improvements for the purposes of long-term housing policy as soon as the initial difficulties of building labour supply have been surmounted and building costs have settled down to reasonable levels. We do not regard these recommendations as extravagant. Indeed, to take but one example, we consider that limitations of standards on such matters as sound insulation which so profoundly affects the privacy and amenity of the home, are wholly retrogressive. At the same time essential improvements are inevitably bound up with questions of cost and if improvements on the lines we recommend are ever to be introduced into houses to be built in Scotland after the war the whole question of building costs will require to be much more strenuously dealt with than it has been in the past. We feel bound to lay the greatest possible emphasis on the fact that the postponement of improved and permanent standards on the lines which we have recommended is not an effective instrument for reducing costs. We therefore hope that the most energetic examination of the whole question of building costs will be undertaken so that the full standards which we have formulated may be attained at the earliest possible date. [341]

All these questions are, of course, of great complexity and raise major issues of economic policy, such as the appropriate amount of capital expenditure to be devoted to house construction after the war, the level of interest charges—which substantially affected housing operations at the end of the last war—and the like, which lie outside our present terms of reference, but in view of the importance of building costs and of their probable effect on post-war housing standards, we feel obliged to make some suggestions on the considerations involved. [342]

We have already expressed the hope that the maximum possible degree of standardisation will be secured in house construction and in the manufacture of house fittings and equipment in the immediate post-war period. This is essential if speed in production and reduction in costs are to be achieved. Further measures are necessary, however, if the special difficulties of the immediate post-war years are to be surmounted. It has been the universal experience in the past in the launching of ambitious housing programmes that orthodox methods of planning and pricing have led to delay in commencing actual building operations, overloading of the market, and all those other factors which tend to slow down output and to inflate costs. We believe that in face of the enormous demands for housing accommodation which will arise immediately upon the conclusion of hostilities, public opinion will not tolerate delay in the provision of necessary housing accommodation or grossly unreasonable increases in the costs of such provision. We are therefore disposed to think that the traditional system, whereby each building authority prepares its own plans, its own schedules, without regard to the conditions of the market or the operations being carried out or planned by other local authorities, must be reconsidered if rapid progress in building is to be secured and building costs are to be stabilised. The Report of the Barr Committee on Building Costs, published in 1939, has already made the suggestion that different local authorities should agree to the adoption of the same type-plans, sufficiently varied to avoid monotony, and we think that this principle of the co-ordinated planning of types of houses should be specially considered as a measure to meet the immediate difficulties of the post-war situation. We therefore suggest that a Committee, representative of architects, quantity surveyors, the building industry, local authorities, and other interests concerned, should be set up by the Secretary of State to consider:

(i) the advisability of the preparation by the Central Department, on the advice of an architectural panel, of standard type-plans, including elevations and working details, of

houses for the guidance of local authorities in the immediate post-war years, and

(ii) such measures as they think proper having regard to the necessity of avoiding delay in launching schemes of house building and in the construction thereof.

We assume that such standard plans as might be devised would be based on the standards of accommodation, etc. illustrated in the model short-term plans incorporated in this report. [343]

In addition we suggest that this Committee should also be asked to consider a method or methods of fixing and controlling prices of houses to be erected in the immediate post-war years. Nothing is more disturbing in the whole economics of house building than the tremendous disparities which arise in boom periods between the costs of comparable houses in different areas. In 1920-21, for example, it was common to find prices varying between £800 and £1,500 for houses of essentially the same size in different parts of the country where conditions were otherwise comparable, and corresponding disparities in prices have, we understand, occurred again under the limited programme of new house building authorised in Scotland in 1943. The principle of price control has come to be accepted by public opinion during the war as the most valuable of all checks against unwarranted inflation in the prices of essential commodities and as a measure of stabilising prices of equivalent commodities in different areas. The Government have made it clear that in the immediate post-war period they propose to carry over this principle so far as concerns essential needs. Few needs, it seems to us, are more essential than the provision of homes for the thousands of families who, after the war, will wish to set up house for the first time, and for the large proportion of families who are living in such deplorably squalid and overcrowded conditions in Scotland. We fully realise that the application of the principle of "price control" to house building presents difficulties of a complex and highly technical character, but we are convinced that no aspect of the post-war housing problem is more worthy of full and expert examination. [344]

PART II: SUPPLY OF FURNITURE BY LOCAL AUTHORITIES

Chapter IX:

THE Dwelling Houses (Scotland) Act, 1855, which was the first Act relating to working-class housing in Scotland, and subsequent Acts down to 1890 made no provision for the supply of furniture and fittings. [345]

In the Housing of the Working Classes (Scotland) Act, 1890, reference was made for the first time to the provision by local authorities of furniture, fittings, and conveniences. The relative powers are contained in Section 59 of this Act which reads as follows:

"The local authority may, on any land acquired or appropriated by them, erect any buildings suitable for lodging-houses for the working classes, and convert any buildings into lodging-houses for the working classes, and may alter, enlarge, repair and improve the same respectively, and fit up, furnish, and supply the same respectively with all requisite furniture, fittings and conveniences."

["The expression 'lodging houses for the working classes' when used in this part of this Act shall include separate houses or cottages for the working classes, whether containing one or several tenements. . . ."] [346]

Local authorities, however, made little use of their general powers under the Housing Acts until direct assistance from the Exchequer was made available by the terms of the Housing, Town Planning, etc. (Scotland) Act, 1919. Amending Acts were passed in each year from 1920 to 1924 and in 1925 a consolidating Act was passed, the Housing (Scotland) Act, 1925. The existing powers of local authorities to provide furniture, fittings, etc., are now contained in Sub-section (2) of Section 43 of the 1925 Housing Act which is in the following terms:

"The local authority may alter, enlarge, repair or improve any house so erected, converted or acquired, and may fit out, furnish and supply any such house with all requisite furniture, fittings and conveniences." [347]

Most local authorities in Scotland who have used their powers under Sub-section (2) of Section 43 of the Housing (Scotland) Act, 1925, have done so only to a limited extent. All authorities provide in the houses which they

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build, essential domestic equipment such as sink, tub, copper (wash boiler), cooking stove, and a certain amount of cupboard accommodation. Very few authorities provide built-in furniture such as wardrobes, cabinets, etc., and according to the information which is available, only 23 of the 228 local authorities in Scotland have made use of their powers to provide movable furniture and furnishings. A number of the schemes have now been suspended on account of difficulty in obtaining supplies but, prior to the war, provision was made by these authorities as follows:

- 12 supplied beds and bedding.
- 3 ,, bedsteads only.
- 2 ,, beds, bedding and some articles of movable furniture.
- 2 supplied beds, bedding and linoleum.
- 1 ,, beds, bedding, built-in furniture and linoleum.
- 1 supplied bedding, some articles of built-in furniture, washing machines and electric irons.
- 1 supplied some built-in furniture.
- 1 ,, bedding only.
-
- 23 Total.

Seventeen authorities supplied these articles under hire purchase arrangements and six authorities supplied them free of charge. Two authorities provided iron bedsteads free but made a charge for wooden bedsteads and other articles. Provision of beds, etc., was restricted by four authorities to rehoused families only, by one authority to necessitous cases and by one authority to cases where existing bedding was infested by vermin and had to be destroyed. In a few cases authorities have furnished small houses with all essential equipment. [348]

Although many local authorities in Scotland have been slow to avail themselves of their powers under Section 43 (2) of the Housing (Scotland) Act, 1925, there were indications in the years immediately before the war of an extension in the use of these powers by housing authorities. [349]

Under the powers conferred on them as

Statutory Supply Undertakers many local authorities in Scotland hire or sell to any person, whether or not a tenant of a local authority house, gas and electric cookers, gas and electric space heaters and water heaters. A few

authorities also supply, on hire or on sale, gas or electric irons, washing machines, vacuum cleaners, etc. In the case of the larger authorities such operations are on a comparatively substantial scale. [350]

Chapter X:

WHAT SHOULD BE PROVIDED

WE have already specified in Chapter V of this report the items of equipment which in our view should be provided with the house as "standard" equipment. Provision of such items will not, however, of itself suffice to make the house a home and for this purpose what we call "non-standard" equipment, *i.e.* movable furniture and furnishings, will, of course, also be required and we have to consider how best local authorities can utilise their powers under the Act of 1925 for this purpose.

The main questions to be determined in relation to non-standard equipment are:

What are the essential items of furniture and furnishings necessary and by whom should they be provided?

Secondly, what other items of furniture and furnishings are desirable and how should they be made available? [351]

I. Essential items of movable furniture, furnishings, etc.

In our opinion, the following items of movable furniture and furnishings are essential to every home; we give these items in order of priority:

Beds and bedding.
Tables.
Chairs.
Chest of drawers.
Floor coverings.

These items will be additional to essential built-in accommodation already recommended for crockery, food, clothing and miscellaneous domestic equipment. [352]

There are three possible ways in which essential items of this kind could be made available by local authorities through the exercise of their

powers under the Housing Acts with which we are at present concerned:

(a) by the local authority to those tenants who have not the means to make their own provision;

(b) by the local authority to all tenants of local authority houses irrespective of the financial circumstances of the tenants of those houses;

(c) by the local authority to all house occupiers whether or not tenants of local authority houses and without regard to means. [353]

We have the following observations to make on each of these possible methods of provision:

(a) there can be little doubt from the experience of many local authorities in pre-war years that many tenants rehoused from unfit or overcrowded houses have very little furniture with which to equip their new homes and that such furniture and furnishings as they may possess may require to be destroyed by the local authority on account of its verminous condition and may consequently require replacement. It was a common experience of local authorities before the war to find that families rehoused in such circumstances were unable to take full advantage of the more ample accommodation available to them in the houses to which they were transferred. For this reason, several local authorities deemed it their duty as housing authorities to provide such tenants with sufficient furniture to enable them to take full advantage of their new homes. We have recorded in Chapter IX details of the extent to which local authorities have used their powers under the Housing Acts in this way and have given particulars of the items of furniture and furnishings supplied. It is our opinion,

however, that these powers were not used to a sufficient extent. In almost all areas, there will be a minority of rehoused tenants who will need this kind of service and we recommend that all housing authorities should be ready to provide essential items of furniture to those tenants who really need them. We deal in the following chapter with the administrative and financial arrangements that will be required to cover cases of this kind. We should, however, like to say here that we think that such provision by local authorities should not be confined simply to beds and bedding but should be extended to all the items described as "essential" in paragraph 352. Not all of these items will, of course, be required in each case but the local authority's furniture supply service should be so organised that the local authority can meet any essential deficiencies in the case of necessitous tenants rehoused by them. [354]

(b) We have considered very carefully whether the service which we have just recommended should be available to all tenants of local authority houses irrespective of need and we have received some evidence in support of proposals of this nature. The balance of opinion in our evidence, however, is that it would be imprudent for local authorities to attempt to organise their furniture supply schemes in this way. The vast majority of tenants will be able and anxious to make this provision for themselves and if the local authorities were to provide a satisfactory service in this respect as regards these items of equipment and to cater for all requirements and tastes, they would require to carry a wide variety of essential furniture and furnishings. [355]

(c) It follows that we think it would be inappropriate for local authorities to attempt to supply essential items of equipment to all house occupiers in their area and indeed they have at present no power to do so. [356]

II. Non-essential but desirable Items

We now proceed to consider a number of non-essential but desirable items of equipment which for various reasons it has been suggested might be brought within the scope of the powers of the local authority which we are examining. Examples of such items of movable furniture and furnishings are the following:

- Suites of movable furniture for living-rooms and bedrooms.
- Rugs, carpets, etc.
- Space heaters (gas and electric fires).
- Vacuum cleaners.
- Electric irons, etc.

[357]

Any suggestion that such items of equipment should be provided by local authorities requires to be considered from two points of view:

(A) the possible provision of these items by the local authority as housing authority;

(B) the provision of these items by the local authority as the authority responsible for gas or electricity supply services. [358]

(A) It seems clear that as far as non-standard equipment is concerned the local authority as housing authority could appropriately supply only furniture and furnishings, *i.e.* suites of movable furniture, rugs, carpets, etc., and not "appliances" such as vacuum cleaners, electric irons, etc. It is also clear that if local authorities were to exercise their powers on this scale the provision could not, of course, be confined to necessitous tenants and indeed there would be difficulty in confining it solely to tenants of local authority property. [359]

The main arguments advanced to us in favour of the proposal that local authorities should use their powers under the Housing Acts to supply all the items of movable furniture and furnishings required in the home are the following:

(i) prior to the war the majority of tenants rehoused by local authorities were anxious to provide themselves with new furniture for their new homes. This tempted them, in many cases, to purchase furniture and furnishings which were very inferior in quality and for which exorbitant charges were made. Such purchases were usually made on the instalment system and many tenants of local authority houses imprudently committed themselves to weekly payments of substantial amounts which resulted in other necessary domestic expenditure being curtailed and, in extreme cases, in the tenants accumulating arrears of rent against the local housing authority. It is said that the tenant's ambition to secure new furniture and furnishings for his new home is most commendable but that positive measures are necessary to avoid the difficulties which arose in this connection before the war. If local authorities were to provide a furniture supply service on comprehensive lines they would be able to ensure that their tenants procured good quality furniture at reasonable cost and that the payments for such furniture were not an undue burden on the home. [360]

(ii) in the immediate post-war years, there will be an unprecedented demand for furniture and furnishings. Priority of supplies should be afforded to persons at present living in overcrowded or unfit houses and being

rehoused by the local authority or to persons, e.g. couples who have married during the war, being provided with homes for the first time by the local authority. It will be difficult to ensure that supplies of good quality furniture at reasonable cost can be made available to meet these priority needs unless the local authority responsible for providing the houses are also able to see that the houses are properly equipped and furnished. [361]

While we fully appreciate the weight of these arguments we are not satisfied that the provision of furniture by local authorities on the scale contemplated provides the best solution of the problems on which the arguments are based. We have already said that if local authorities are to be encouraged to supply all items of non-standard movable furniture and furnishings, it will be extremely difficult for such supplies to be limited to their own tenants. Even in the immediate post-war years when it may be expected that the bulk of new houses in Scotland to meet priority needs will be provided by local authorities, there will still be many families who will find new homes in existing properties which are in the ownership of and are managed by private enterprise. Clearly such families also would require to be entitled to avail themselves of the comprehensive furniture supply service of the local authority envisaged in the proposal which we are now considering. This would involve the local authority in setting up an elaborate organisation to supply furniture to all tenants in the priority classes and to collect payments on that furniture on the assumption which seems probable that such furniture would be paid for on the instalment basis. We have received no evidence that local authorities are prepared to operate on this scale nor would it seem desirable that they should do so. [362]

There are other reasons why we feel we cannot support such a proposal. The assurance that good quality furniture will be available at reasonable cost to meet the urgent demands which will arise in the immediate post-war period has to be considered, it seems to us, as an entirely separate problem from the house building activities of local authorities although the demand will, of course, be primarily related to those activities. The production of good quality furniture and the marketing of such furniture at reasonable cost including reasonable hire-purchase charges is a matter to be determined in the first instance by experts in this field, that is, the furniture industry in consultation with the appropriate Government Departments con-

cerned. It is on this basis that the Utility Furniture Scheme promoted by the President of the Board of Trade during the war has been framed and we think that an extension of this scheme is the best method of securing the results which the post-war situation will require. This scheme under which furniture is manufactured to standard specifications covering design, sizes, and quality and sold at controlled prices and subject to limitations of interest rates when hire purchase agreements are arranged, seems to us to provide the basis of the solution of post-war difficulties. We think it much to be preferred that the supply of furniture to meet post-war needs should be based on an extension of the Utility Furniture Scheme rather than upon any proposals for the comprehensive marketing of furniture by local authorities. We deal in more detail with the possible extension of the Utility Furniture Scheme in Chapter XIII. [363]

(B) The supply of domestic appliances, such as space heaters, vacuum cleaners, washing machines, etc., by local authorities as Supply Undertakings, does not come within the scope of the provisions of the Housing Acts which we are examining and is therefore outside our terms of reference. We should, however, like to make two points clear:

(i) It seems to us essential that such appliances involving the use of gas and electric power should always be supplied by the agency responsible for the power supply. The provision and maintenance of these items involves technical questions of power supply and any undertaking which supplies these items should normally be able to provide also requisite services for maintenance, etc. The local authority *qua* housing authority is unable to provide these services and for this reason is, in our opinion, an inappropriate authority for supplying the appliances. [364]

(ii) Although such appliances have been designated in this report as non-essential items of equipment, they are, of all items in the modern home, those which are likely to produce the greatest improvement in standards of amenity, comfort and convenience to the housewife. For this reason, it seems to us that everything possible should be done to encourage the production of these items in bulk to standardised patterns and at reasonable costs. Local authorities as Supply Undertakings can give a great deal of encouragement in this direction by facilitating the marketing of these appliances. [365]

Chapter XI: ADMINISTRATION AND ADDITIONAL POWERS

WE have described briefly in Chapter IX the extent to which local authorities in Scotland have availed themselves of their powers under the Housing Acts to supply furniture, fittings, and conveniences. We saw that out of 228 local housing authorities in Scotland, 23 had furniture supply schemes and that the majority of these schemes provided beds and bedding only. Provision was made mainly for tenants who when rehoused were found to be in need of these items of furniture and furnishings. [366]

In the majority of schemes, the items provided were purchased in bulk by the local authority and were paid for by the tenants by small weekly instalments collected with the rent. When the payments were completed the articles became the property of the tenants. In almost all cases, the articles were supplied to the tenants at wholesale prices with an additional percentage of these prices to cover the local authority's administrative costs and with a further percentage to cover costs of collection and interest charges where payment was made by instalments. In a minority of cases, *e.g.* those in which the beds, bedding, or furniture of tenants rehoused had to be destroyed by the local authority because of its verminous or dilapidated condition, the local authority supplied furniture, etc., free under their schemes. In these cases the articles so supplied became the property of the tenant. [367]

In the preceding chapter, we recommend that wider use should be made by local housing authorities in Scotland of their powers to provide essential items of movable furniture and furnishings to tenants rehoused by them. We should like to see more local authorities make use of these powers and we should like to see the items provided extended in range to cover the items specified in paragraph 352. [368]

We think that the administrative arrangements involved in the wider use of these powers should follow the model of local authorities' existing supply schemes, *i.e.* local authorities should purchase these essential items in bulk from wholesale suppliers and should make the furniture available to tenants at wholesale prices, plus an appropriate percentage to cover their admini-

strative charges. This percentage should, in our view, rarely require to exceed 15 per cent. although, of course, the precise percentage will depend upon the circumstances in each local authority area. We think that in all cases the furniture supply scheme, the administrative arrangements made and the percentage charges levied for administration and for hire-purchase agreements covering the items supplied should be subject to the approval of the Department of Health. [369]

We have considered carefully whether the provision of essential items of furniture should be in terms limited to necessitous tenants, and we have decided that no such formal limitation is necessary or desirable. We have recommended in the preceding chapter that local authority schemes for the provision of essential items of furniture and furnishings should not be based on the assumption that they will have to cater for all requirements and tastes. Indeed, unless local authorities are to embark upon the marketing of furniture on a substantial scale, it is clear that there will be limitations in the ranges and types of essential articles which they will be able to make available. In view of these limitations, the provision is unlikely to be abused by tenants who have the means to provide these items for themselves and we therefore do not think it necessary for local authorities administering furniture supply schemes to arrange for tests of the circumstances of the tenants to whom essential items should be provided under these schemes. [370]

Tenants to whom essential items are supplied should have the option either to pay for the items in single cash payments or to purchase the items by instalments in which case the instalments could be conveniently collected with the rent. We do not think that the furniture should in any circumstances be hired to the tenant and continue to be the permanent property of the local authority. [371]

We have now to consider in relation to the recommendations made in previous chapters the specific question particularised in our terms of reference, namely, what additional powers should be made available to local authorities. As we have already pointed out, the existing powers of

local authorities are contained in Sub-section (2) of Section 43 of the Housing (Scotland) Act, 1925, which is in the following terms:

“The local authority may alter, enlarge, repair or improve any house so erected, converted or acquired, and may fit out, furnish and supply any such house with all requisite furniture, fittings and conveniences.” [372]

We have already given a broad indication of the extent to which these powers have been used by a number of local authorities in Scotland, and precisely similar powers have been exercised by many local authorities in England and Wales to provide essential items of furniture, fittings, etc.,

such as beds, bedding, tables, chairs and the other items which we have described as essential items in paragraph 352 of this report. In brief, our recommendations simply advocate that local authorities in general should follow the precedents already established by such furniture supply schemes. The majority of local authorities who have exercised their powers in this way have taken the view that the provisions of the sub-section referred to are comprehensive in enabling them to furnish their houses with all requisite furniture, etc., and have found them adequate for their purposes. We endorse this view and we do not therefore consider that further powers are necessary. [373]

Chapter XII: HOUSE MANAGEMENT AND FURNITURE SUPPLY

THE whole field of house management which is now widely appreciated to be one of paramount importance in relation to the housing operations of local authorities is not proper for consideration as part of the present enquiry. There are, however, some aspects of house management which we feel bound to touch upon if the recommendations made in the preceding chapters are to be fully effective. [374]

Many tenants rehoused by local authorities have previously been living in most unsatisfactory conditions. As we have seen, about 405,000 houses in Scotland have no adequate sanitary conveniences and an even larger number are inadequately equipped with even the most essential domestic appliances. The new homes to which such tenants are transferred provide very much higher standards of equipment and there can be little doubt that many tenants feel strange and ill at ease in their new environment. There is much in the new home which is unfamiliar to them and in the initial period they need help and guidance if they are to enjoy to the full the advantages of these new facilities. [375]

It is a common experience of many local authorities to find, for example, that owing to inexperience many tenants are unable to use the cooking appliances in their new homes, gas cookers and more especially electric cookers, economically and efficiently. Similar difficulties arise in relation to the washing copper, back-to-back grates and even the control of the hot water

supply system where this is provided by the back boiler associated with the living-room fire. If higher standards of equipment and conveniences are incorporated in houses built by local authorities in Scotland after the war in accordance with our recommendations, these difficulties will be accentuated. [376]

We found that in many housing estates provided by public utility societies and local authorities in England, special care was taken to help the tenants with their initial difficulties and problems in this respect. We have in mind particularly those estates which we visited where trained women housing managers were employed who were able to give helpful advice to housewives on the best and most economical way of using the various appliances and fittings with which the new home was equipped; under arrangements of this kind, the woman housing manager provides the same kind of individual service to the individual housewife as has been found so effective on a wider scale during the war in such services as Food Advice Centres and the like. [377]

Services of this kind meet a real need and we would therefore welcome their wide extension. In the larger cities and burghs, a great deal might be done in this connection through the offices of the local gas and electricity departments, but it must be kept in mind that advantage is rarely taken of advice given in this way by those tenants who really need advice and help.

We therefore recommend that all local authorities should keep in view the special problems to which we have referred and that as part of their management arrangements they should provide machinery enabling advice to be given to individual housewives on the questions involved in running the home. We think that independently of arranging demonstrations of the working of individual items of equipment for housewives in general, visits should be made in appropriate cases to individual homes so that advice may be given on the spot and particular difficulties resolved. [378]

Arrangements of this kind are of special value in helping local authorities to deal with the small minority of tenants who are positively neglectful or "difficult." All local authorities are familiar with the few tenants who, after being rehoused from verminous conditions and provided with new furniture, through neglect and continuance of dirty habits allow their new furniture and their new homes to become infested. This, of course, raises wide questions of fundamental importance to house management which are outwith the scope of our present enquiry. We need only say here that we feel that a properly organised system of management should provide for consideration being given to tenants of this type even before they have been removed from their old homes so that on transfer to their new homes proper super-

vision can be secured of their response to their new environment and the maximum amount of guidance and assistance given to them. [379]

One supplementary point relating to management in its broadest aspects deserves special mention. Several local authorities who submitted evidence to us informed us that in framing their evidence, particularly on questions of furnishing and equipment, they had taken the opportunity of consulting the local branches of women's organisations, such as the Scottish Women's Rural Institutes, the Townswomen's Guilds, the Co-operative Women's Guild, the Women's Voluntary Services and the like. These local authorities felt that their evidence had been considerably enhanced by the practical suggestions made from the housewife's point of view by these organisations, and from the nature of the evidence which we have ourselves received directly from these organisations we are sure that this opinion is well-founded. [380]

We see no reason why this excellent precedent of consulting local women's organisations should not be followed by all local authorities when they are designing and planning their future housing schemes. In this way they would be kept in direct touch with public opinion as represented in organisations which are representative of the housewife and can give expression to her point of view. [381]

Chapter XIII: POST-WAR PROSPECTS

REFERENCE has already been made in paragraphs 361-363 to some of the difficulties which will inevitably arise in connection with the supply of furniture in the immediate post-war years; we now propose to deal with these problems in greater detail. [382]

It is quite clear that in face of housing needs of the magnitude described in Chapters I and VIII of this report special steps will be required to secure that good quality furniture is available at reasonable cost so that the houses built to satisfy these demands will be properly equipped. During the war the furniture industry has been concentrated to a substantial extent and owing to shortage of man-power and shortage of materials the output of furniture has been severely curtailed. It will be necessary to ensure that labour and materials are made available to the furniture industry as rapidly as possible

after the war so that the pre-war output of the industry can be attained and exceeded. [383]

In our opinion this question of the production of furniture for the purpose of the immediate post-war housing programme must be considered from two aspects, the production of "standard" equipment, that is, built-in fittings, etc., going with the house, and the production of "non-standard" equipment, that is, movable furniture and appliances. [384]

In the immediate post-war period local authorities could do a great deal to ease the problem of the supply of movable furniture by providing as much "standard" or built-in equipment as possible and we have recommended in Chapter V items of built-in equipment which would obviate the immediate necessity of providing movable furniture such as wardrobes, cabinets, etc. Such built-in furniture in the

form of built-in hanging cupboards in bedrooms, built-in cabinets in living-rooms, and, particularly, built-in kitchen equipment, could readily be manufactured to standard sizes and our recommendations have been framed in detail to facilitate this being done. [385]

We have already made it clear that we attach the highest importance to the standardisation of such fittings to secure bulk production and to reduce prices, and we have recommended that the Government Departments concerned should enter into consultations at the earliest possible date with the industries concerned to settle all the measures necessary to secure the production of standardised fittings on the scale required. As an indication of the practicability of our recommendations in this respect, we have given estimates of costs, based on pre-war prices, of the "standard" fittings recommended in Chapter V, and we have also prepared drawings of this equipment. On the basis of this information we feel that the Government Departments concerned should have little difficulty in undertaking the necessary consultations with the industries involved. [386]

We appreciate that the suggestions which we have made will have to be related to the requirements of particular local authorities and local authorities would, of course, have to be associated with proposals for the large scale production of standard domestic equipment. We would hope that a sufficient variety of patterns of such standardised equipment would be produced as to give local authorities some range of choice of the articles which they would propose to instal in the houses which they will be building. It must be emphasised, however, that if the results which public opinion is demanding in the production of improved domestic equipment at reasonable cost are to be secured, standardisation is absolutely essential and standardisation inevitably involves limitations in patterns and sizes. The principle of standardisation has already been accepted and was working fairly efficiently before the war in relation to such items as sinks, tubs, w.c. fittings, washhand basins, etc. There seems no reason why it should not be applied to other items of domestic equipment which are no less essential from the point of view of the convenience of the housewife and, in so far as local authorities have accepted standardisation of sinks, tubs, etc., there seems no reason to expect that they will fail to take advantage of the benefits to be secured from standardisation of other items of domestic equipment. [387]

As we have already explained in Chapter X, the provision of "non-standard" equipment, that is, movable furniture and appliances, requires separate consideration. We have

already indicated that we regard the Utility Furniture Scheme, promoted by the President of the Board of Trade during the war, as the basis of the solution of the post-war difficulties involved in the supply of movable furniture. The Utility Furniture Scheme in our view should be maintained in the immediate post-war period to ensure the production of good quality furniture at reasonable cost. The Scheme might, however, be extended in the following respects: [388]

(1) The range and variety of designs and the types of material to be used should be extended, but the Board of Trade, advised by the Advisory Committee on Utility Furniture, should continue to determine quality, designs and sizes. [389]

(2) The operation of the Scheme should be more closely linked up with the activities of local housing authorities. Some system of priority permits will almost certainly require to be maintained in the immediate post-war period but we think that the system should be operated in close consultation with local housing authorities. We understand that the list of priority categories has already been extended to include persons rehoused by local authorities and we therefore attach special importance to the consultations which we have suggested. [390]

(3) Local authorities should themselves be entitled to supply those items of furniture in the utility range which we have classified as "essential items of movable furniture" in paragraphs 352 and following. [391]

In addition to the extension of the Utility Furniture Scheme on the lines suggested, we think that it will be necessary in the immediate post-war period to continue and perhaps to strengthen the present control, introduced during the war, of prices of second-hand furniture. In view of the acute demand for furniture in the immediate post-war years there is a grave danger that in the absence of control, prices of second-hand furniture will become seriously inflated as they did after the outbreak of war. There is also the danger that verminous second-hand furniture will find its way into new houses provided by local authorities and we view this prospect particularly with grave concern. We are interested to find that special powers are available to at least one local authority in England to control the sale of verminous second-hand furniture. Section 83 of the Liverpool Corporation Act of 1936 prohibits the sale by any dealer of second-hand furniture which is known to the dealer to be infested with vermin or which by taking reasonable precautions the dealer could have

known to be infested. The same section also empowers the local authority to arrange for the inspection of the premises of second-hand furniture dealers to ensure that the preceding provision is complied with. We think that the

desirability of providing general powers on these lines as part of the arrangements for the control of the disposal of second-hand furniture in the immediate post-war period should be seriously considered. [392

In concluding our report we wish to place on record our warm appreciation of the great assistance which we have received from Mr J. H. McGuinness, Secretary of the Main Committee, Mr A. Reiach, A.R.I.B.A., Secretary of the Housing Design Sub-Committee, and Miss E. S. Beattie, Secretary of the Furniture Sub-Committee.

Very heavy demands have been made upon them but their keen interest in the work and their intimate knowledge of the subject have enabled them to meet all these demands with outstanding efficiency and ability.

In addition to his valuable advice and guidance during our deliberations we are indebted to Mr McGuinness for the great help he has given us in the preparation of our report.

We have also to express our appreciation of the great assistance we have received from Mr G. D. Macniven, F.R.I.B.A., Chief Architect of the Department of Health, and the members of his staff in the consideration and preparation of the plans which accompany our report. Mr Macniven's intimate technical knowledge and wide experience of the questions which we have investigated have been of inestimable value at every stage of our enquiries.

In addition, we should also like to acknowledge our indebtedness to Dr J. S. Westwater, M.D., D.P.H., Mr J. A. Macintyre, M.Inst.C.E., and Mr H. H. McTaggart, F.S.I., of the Department of Health, and Mr F. E. Towndrow, A.R.I.B.A., and Mr John Wilson, F.R.I.B.A., of the Ministry of Works for their valuable advice on many technical aspects of our investigations.

We have also to record our thanks to Mr James Gray, R.S.W., of Moray House, Edinburgh, who most generously placed his services at the disposal of the deputation from our Committee which visited England and prepared with much skill and care the very interesting and valuable film record of the various housing schemes inspected by the deputation.

Signed for and on behalf of the Committee and of the added Members of the Sub-Committees so far as concerns those sections of the Report for which the Sub-Committees were respectively responsible

(Signed) JOSEPH WESTWOOD, *Chairman of the Committee.*
ROBT. ADAM, *Chairman of the Sub-Committee on Housing Design.*
JAMES WELSH, *Chairman of the Sub-Committee on Furniture.*

(Signed) J. H. MCGUINNESS, *Secretary of the Committee.*
A. REIACH, *Secretary of the Sub-Committee on Housing Design.*
E. S. BEATTIE, *Secretary of the Sub-Committee on Furniture.*

12th November 1943.
St Andrew's House,
Edinburgh, 1.

SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

[The references are to the paragraphs of the Report]

PART I: DESIGN AND CONSTRUCTION, EQUIPMENT AND LAYOUT OF NEW HOUSES

THE TYPE OF HOUSE

COTTAGES The cottage type of house is widely preferred to any other and the largest proportion of the houses to be built after the war should be of this type. The single-storey cottage is particularly appropriate for aging persons and in rural areas. In general, local authorities should erect the particular type most appropriate to their local circumstances. [8, 9, 12-14]

FLATTED HOUSES Houses of this type must be especially well insulated against sound transmission and should be built in longer blocks wherever practicable. Flatted houses should not be erected in rural areas unless there are special circumstances which make their construction in such areas essential. [8, 10, 15-18]

FLATS ("TENEMENTS") Flats will inevitably be required in some areas, particularly in the redevelopment of central areas in the larger burghs and the cities. Adequate sound insulation is essential. The number of storeys in blocks of flats should not exceed three unless lifts are provided; if lifts are installed multi-storey flats of 6-10 storeys may be appropriate in some districts, particularly in the largest cities. The layout of flats is of paramount importance (v. Layout, page 86). [8, 11, 19-23]

AGING PERSONS In framing their post-war housing programmes all local authorities

should pay special regard to the needs of aging persons. The proportion of houses to be built specially for aging persons depends upon the number of small houses already available in each area and which could be made suitable by modernisation or reconstruction. In some areas small flats, either in independent blocks or on the lower floors of blocks of flats, could appropriately be provided for aging persons. Wherever possible, small houses and flats built for aging persons should constitute an integral part of new housing estates. Aging people should not be segregated and secluded. [24-28]

SINGLE PERSONS Local authorities should consider the provision, where appropriate and necessary, of small houses and flats for single persons. The number will again depend on the number of existing small houses and flats which are capable of being modernised for this purpose. [24 and 29]

SPECIAL NEEDS Special types of houses for special types of communities are not recommended. Special requirements in certain areas involve matters of detail only, e.g. additional storage accommodation in rural areas; accommodation for nets, etc., in fishing communities; special facilities for the drying of workers' clothes. [24 and 30]

SPACE FOR LIVING

PRESENT STANDARDS

Space per Person

Existing standards regulating the cubic content of the house as a whole require co-ordination and amendment. An overall standard for the whole house does not ensure the application of scientific medical standards to individual apartments. It is recommended that precise standards of space per person in terms rather of floor area than of cubic capacity should

be laid down for bedrooms on the basis of a minimum of 60 square feet per person for 2-person bedrooms, giving a minimum area of 120 square feet for such bedrooms. If, for the purposes of statutory provision, it is more convenient that this minimum should be expressed in terms of cubic capacity, then the minimum ceiling height of 8 feet should be applied as a maximum for the purposes of calculation, giving a minimum cubic capacity of 960 cubic feet for each 2-person bedroom. [31-40]

Persons per Room

The existing requirement that new houses provided by local authorities should not be occupied *below* the standard laid down in the First Schedule to the Housing (Scotland) Act, 1935, should be abandoned. This standard is a penal standard of overcrowding and was not intended to be applied to rehousing operations. It involves (1) treating the living-room as a sleeping apartment, (2) counting children under 10 as "half persons," and (3) discounting infants under one year. The new standard to be applied and to be incorporated in future legislation should be broadly equivalent to that laid down in the English Housing Act of 1936, viz. bedrooms only should be taken into account and all individuals of whatever age should be treated as "persons" in assessing the accommodation capacity of new houses provided by local authorities in accordance with the following formula: 2 bedrooms—4 persons; 3 bedrooms—6 persons; 4 bedrooms—8 persons; with the addition of 2 persons for each additional bedroom on the basis that each bedroom would be a 2-person bedroom of the minimum area already recommended. In the application of the standard, account should be taken in particular cases of the need for ensuring sex separation in such a way that the living-room does not require to be used as a sleeping apartment. [41-53]

FUTURE STANDARDS

Floor Areas

The following minimum floor areas are recommended:

Bedrooms

1st bedroom . . . 150-160 square feet
2nd, 3rd, etc., bedrooms 120 square feet.

All subsidiary bedrooms should be, as far as practicable, of the minimum standard size of 120 square feet. [54-58]

Living-rooms

Unless supplementary living accommodation in the form of a parlour or dining annexe is provided in the house, the area of the living-room should vary with the number of bedrooms contained in the house as follows:

No. of Bedrooms. Minimum Area of Living-room.

2 . . .	180 square feet;
3 . . .	190 square feet;
4 . . .	200 square feet;

with the addition of 10 square feet to the area of the living-room for each additional 2-person bedroom contained in the house. [54, 59, 60]

The following alternative distributions of

living accommodation in the house are suggested:

- (i) *Living-room only.*
- (ii) *Living-room and parlour*—The proportion of municipal houses provided with parlours in England is in many areas as high as 20 per cent. Almost no houses of this type have been erected by local authorities in Scotland. It is recommended that local authorities in Scotland should provide a proportion of parlour-type houses. [61]
- (iii) *Living-room with dining annexe*—In some cases, particularly in houses with 3 bedrooms or less, a dining annexe off the main living-room provides a suitable alternative to the parlour. [62]
- (iv) *Living-room with dining annexe associated with the kitchen*—In all areas where the kitchen is likely to be used as an occasional dining apartment, the provision of a dining annexe in the kitchen should be considered. The dining annexe, whether provided in the living-room or in the kitchen, should be not less than 50 square feet in area. [63]

Kitchen-Scullery If the kitchen is to be used for meals and for the washing of clothes, it should have a minimum area of 130 square feet made up of 80 square feet for the kitchen proper and 50 square feet for the dining annexe. [64-65]

Utility Room In all family houses, washing should be taken out of the kitchen and a separate utility room provided for the purpose. This utility room should be not less than 40 square feet and the area of the kitchen proper should then be not less than 70 square feet exclusive of the dining annexe. [66-67]

Bathroom-W.C. Apartment The minimum area of this apartment when it includes both washing and sanitary facilities should be not less than 36 square feet. [71]

Lobby and Passage Space Ample lobby and hall accommodation should be provided in new houses and should be adequately lighted, preferably by direct lighting. [72]

Stairs and Staircases Staircases should always be planned without wheeling steps. Internal staircases should have a clear minimum width of 3 feet 3 inches and common staircases a corresponding width of 4 feet. [73]

Ceiling Heights The present minimum standards of ceiling heights should be retained. [74-75]

WHAT THE NEW STANDARDS WILL MEAN Only 26.3 per cent. of the 230,000

houses built by local authorities in the inter-war years were of 4 apartments or more whereas the corresponding percentage of houses of these sizes built by local authorities in England and Wales was 80·2 per cent. The long view should

be taken of post-war housing requirements in Scotland and the over-building of undersized houses which has been the radical defect of housing conditions in Scotland in the past should, in particular, be avoided. [76-78]

PLANNING THE HOUSE

BASIC PRINCIPLES The aspect of the various apartments in relation to daylight and sunlight requires careful consideration and through draughts should be eliminated. All living-rooms and bedrooms should have independent access to a lobby and be suitably planned for furniture. [79-82]

GROUPING THE ROOMS AND PLANNING FOR CONVENIENCE AND AMENITY

The living-room and kitchen, as the working apartments of the house, should receive special consideration from architects and, where these apartments do not communicate directly, "through" cupboards or a hatch should be installed. Special regard should be paid to the lighting of the kitchen-utility room; in these apartments, the window area should be not less than one-eighth of the floor area and supplementary local lighting should be considered. [83, 88-92]

A combined living-room and bedroom annexe should be provided in houses for aging persons. The bedroom annexe should have a minimum area of 80 square feet and should be separately ventilated with a separate window. [93]

Bedrooms should be planned together and no bedroom should open off a living apartment. In houses of 5 apartments containing 4 bedrooms, one bedroom should be provided on the ground floor. The detailed planning of bedrooms requires special care and plans should show the location of beds and should ensure that beds need not be placed in draughts, etc. [84-85, 94]

Bathroom-W.C. Apartment In houses of 3 bedrooms and less the bath, w.c., and wash-hand basin should be in a single apartment. In larger houses either an additional w.c. apartment should be provided or the bath and w.c. should be in separate apartments. A small wash-hand basin should always be installed where the w.c. is in a separate apartment. [86-87, 95]

Balconies In suitable areas and where the layout and aspect of flatted houses or flats is appropriate, a balcony might be provided in houses of these types to enable young children to enjoy fresh air and sunshine under the eye of the mother. [96]

Outbuilding Accommodation, where required, should always be provided and should be planned as regards standards of construction and design in conformity with the general design of the house. [97]

SERVICES, FITTINGS AND STANDARD EQUIPMENT

I. SERVICING THE HOUSE

Water Supply, Sanitation, and Drainage The absence of internal water supply in many houses in Scotland particularly in rural areas is deplorable. Measures should be initiated at the earliest possible moment to bring about the regional control and development of water supplies to ensure wholesale improvement in this respect. [98-100]

About 405,000 houses in Scotland are estimated to have no independent water closets, no water closets at all, or no sanitary conveniences of any description. All new houses to be built after the war should be provided with sanitary and drainage facilities, and local authorities should co-operate to ensure that efficient drainage and sewerage schemes may be planned as part of a comprehensive post-war housing programme. [101-103]

The one-pipe system of drainage is more economical and satisfactory than the two-pipe system and should be generally adopted for post-war housing purposes. This system should be associated with a method of carrying all piping in internal ducts to obviate dangers of freezing, to secure economies in cost, to facilitate the possible prefabrication of plumbing units, and to improve the external appearance of houses and particularly of blocks of flats. [104-108]

Sanitary Fittings The bath and wash-hand basin should always be separate fittings, and the bath should be of the panel-enclosed type. The incorporation of a shower might be considered, particularly in houses for aging persons and for workers employed in dusty and dirty conditions. [109-113]

Cooking

(a) *Solid Fuel.* Experimental work on new types of solid fuel heat-storage cookers is commended. These units are likely to be of special value in rural areas where gas and electricity supplies are not available. [114-115]

(b) *Gas.* The modern types of gas cooker have proved satisfactory. [116]

(c) *Electricity.* Electric cookers are growing in popularity and radical measures should be taken to provide supplies of cheap electricity for all purposes, in rural Scotland particularly. [117]

The local authorities, in conjunction with the Department of Health, should determine in each case the type of power to be used for cooking purposes. [118]

Space Heating Greater economies in the domestic use of raw coal are recommended and to minimise atmospheric pollution the development and use of appliances burning smokeless fuel should be encouraged. Coal fireplaces should be provided in living-rooms and in the principal bedroom. This should be the minimum provision. Coal fireplaces are not necessary in every bedroom, provided facilities are available for the use of space heaters and that suitable means of alternative ventilation are installed in bedrooms without flues. Coal fireplaces should be of a type and design easily kept clean, and the flues should be built into the internal walls of the house. [120-121]

(a) *Central heating and district heating.* Central heating systems in individual dwellings should be made the subject of further experimentation in the light of the experience gained in America and elsewhere in the installation of systems of air space heating. Central heating supplied on the district model is capable of immediate application to certain types of development and will result in substantial economies in fuel consumption and in fuel costs to the tenant. [122-123]

(b) *Heating by electricity or gas.* Electric fires are normally preferred where charges for electric power are reasonable. Power plugs should, therefore, be installed in all rooms except the bathroom and the provision of built-in panel electric fires in bedrooms without fireplaces should be considered. [124]

Hot Water Supply Every house should be provided with an efficient and economical water-heating system and supplementary water-heating facilities made available, where appropriate. [125-126]

Central hot water supply should be considered in association with all proposals for district heating. [127]

Lighting Electricity is universally preferred for lighting purposes, and, where electricity supplies are not immediately available but may be within a reasonable time, houses when built should be tubed for the supply. [128]

Washing Communal laundries should be provided as integral features of flat development in appropriate circumstances, but even where these facilities are made available, individual flats should also be equipped with washing facilities. [129-131]

Refuse Disposal

(a) *Cottages and flatted houses.* Standard bins should be prescribed and provided by each local authority where refuse collection facilities are available. Alternatively, where there are no refuse collection facilities, particularly in rural areas, refuse should be burned, especially where independent stoves in the kitchen are provided. [132-134]

(b) *Flats.* The Garchey or a similar system of refuse disposal should be considered for adoption in all future schemes of flats and where this is not practicable some alternative arrangement should be devised which does not involve the carrying of refuse bins from the house to the ground floor for collection. [135-139]

General Storage Facilities Such facilities should be provided in all houses and accommodation should always be made available for prams, bicycles, garden tools, etc. In appropriate areas, outbuildings might be equipped with a work-bench and shelves. [140-142]

Fuel Storage

(a) *In cottages and flatted houses* main storage space for fuel should never be provided in the kitchen and wherever practicable the fuel store should be so designed and located that coal can be delivered from the outside and collected from inside the house, or alternatively should be located in an outbuilding. In houses on the upper storeys of flatted blocks coal should be stored in a lobby or passage cut off from the rest of the house. [143]

(b) *In flats* coal should never be stored in the kitchen and, where practicable, similar arrangements for outside delivery and inside collection should be adopted. Alternatively coal should be stored in the lobby of the flat. [144]

The coal store should be capable of accommodating not less than 10 cwts. of coal, etc. [145]

Food Storage space in rural houses should be on an ample scale and additional accom-

modation should be made available either in the house or in outbuildings. [146]

Mechanical Installations All multi-storey blocks of flats should be provided with *automatic lifts* designed to carry both passengers and goods. [147]

2. EQUIPPING THE HOME

Kitchen-Utility Room Fitments should be provided on the following scale:

KITCHEN	UTILITY ROOM
Sink, with shelf below for pail, basin, etc.	2 tubs
Towel rails	Draining board
2 draining boards—1 on either side of sink	Copper (wash boiler)
Cooker	Ceiling pulley
Pot racks	Drying cabinet
Larder	
Work-table cabinet	} Kitchen storage fitments
China store	
Dry groceries store	
Broom and cleaning materials store	

The following items should also be considered for incorporation in these apartments:

Refrigerator	Washing machine
Plate racks	Ironing board.

[148-192]

Living-rooms Accommodation should be provided in standard units for books and china, cutlery and small articles, toys, games, wireless, knitting and sewing materials, etc. In appropriate circumstances "through" cupboards, combined with a service hatch, should be planned between the kitchen and the living-room. [193-199]

Bedrooms Built-in hanging cupboards of standard sizes should be provided in bedrooms, equipped with hanging space for clothes, rods and hooks, a hat shelf, etc. [200]

Bathroom - W.C. Apartment A built-in cabinet should be provided for toilet articles; towel rails or adequate belting for the subsequent installation of such rails should be made avail-

able. Small fittings, such as toilet-paper holders, etc., should be provided with the house. [201]

Linen Cupboard Every family house should be provided with a linen cupboard. It should be adequately ventilated but not heated. [202-203]

Coat Cupboard All houses should be provided with a coat cupboard, preferably in the hall or lobby. [204]

Fuel Store This store should accommodate at least 10 cwts. of coal, etc., and should be divided where necessary to accommodate two types of fuel. [205-207]

A General Store inside the house should be provided for boxes, suit-cases, etc. [208]

Miscellaneous Fittings for lights and electricity and gas meters should be readily accessible. Window-blinds and curtain-rods should be provided with the house. [209-212]

Equipment for Distinctive Types of Households

(a) Additional provision may be necessary in *large houses* designed to accommodate large households. [213]

(b) In *smaller households* for one or two persons, including single and aging persons, less kitchen storage, etc., accommodation is required but special labour-saving facilities, e.g. an instantaneous hot water heater, would be useful, particularly for a single person household where the tenant has to go out to work. [214-218]

(c) Additional larder accommodation and storage space for garden produce and feeding stuffs are required in *rural houses* and certain other facilities are suggested. It is especially important that good cooking facilities should be made available in houses in rural areas. [219-223]

Costs of Standard Fitments Estimates based on 1939 prices and on bulk production to standardised patterns show that all the fitments recommended could be provided in a four-roomed house for between £22 and £31 per house, representing a net addition to the weekly rent of 4d. to 5½d. [224-227]

STANDARDS OF CONSTRUCTION

TRADITIONAL MATERIALS

The growing shortage of masons and the increasing costs of stone building are likely to accelerate the substitution of brickwork for stonework for housing purposes in Scotland. Building in stone should, however, be fostered in those areas where craftsmen are still avail-

able and in this and other respects the highest regard should be paid to local conditions and traditions. [230-231]

Further investigations of materials suitable for the production of a satisfactory facing brick in Scotland are commended in view of the contribution that could be made to the external

appearance of houses by the introduction of a good facing brick. [232]

NEW METHODS

In the immediate post-war period alternative methods of building of proved reliability and efficiency will have to be utilised to the maximum possible extent in Scotland. The extended use of such alternative materials as cellular concrete, timber, steel, etc., should be fully explored. A positive policy on experimental building should be adopted immediately as an integral part of the Government's preparations for the post-war housing programme so that experiments may have reached an advanced stage by the conclusion of hostilities. [233-235]

TECHNICAL DETAILS

Weather-proofing All houses should attain the highest standards in this respect; an attractive and satisfactory weather-proof finish as an alternative to harling is desirable, especially in urban areas. [236-237]

Thermal Insulation Full use should be made of recent technical improvements in insulating materials, especially in houses constructed by alternative methods. [238]

Sound-proofing Inadequate sound-proofing is one of the most serious defects in house construction and higher standards of sound insulation, particularly in flatted houses and flats, must be secured. Improvements in sound insulation can be introduced at reasonable cost *e.g.* by providing 11-inch hollow party walls between houses and by incorporating a layer of glass wool or other similar material in the construction of floors, combined with a floating floor. Any tendency to secure economies in building costs by a reduction in standards of sound insulation is to be deplored. [239-240]

The internal planning of the house and the arrangement of rooms should be designed to facilitate sound insulation. Noisy apartments should be planned together and cupboards should be so located as to provide baffles between rooms and between houses. [241-242]

Wall, Floor, etc. Finishings Unnecessary woodwork should be eliminated and coved skirtings, rounded at the corners of rooms should be provided. It may be practicable to utilise plastic materials for internal finishings after the war. [243]

The bathroom, kitchen, and utility room should have an impervious washable finish up to a height of 4 feet 6 inches. [244]

Timber floors should be provided wherever practicable. Steps should be taken to ensure

sufficient timber supplies for the immediate post-war housing programme. If timber is in short supply, priority of preference should be given to timber for floors: substitute materials should be confined to roofing. [245-246]

Types of Window The sash and case timber frame window has proved satisfactory but such windows should be hinged so that they can be opened inwards to facilitate cleaning. Casement windows are becoming more popular in Scotland. Metal casement windows should be well fitted, preferably in wood or concrete frames. [247-249]

Vermin Infestation Each local authority should decide in the light of local conditions the extent to which anti-vermin materials, *e.g.* metal, concrete, etc., should be used. [250]

SOME QUESTIONS OF COST

Standards of construction should not be reduced to a level which will involve substantial maintenance costs in later years. Although local authorities have not been compelled to accept the lowest tender where they have been able to adduce good reasons why they should not do so, the present system of tendering requires, and is being given, expert consideration. [251-254]

STANDARDISATION AND PREFABRICATION

Standardisation Standardisation, both of building components and of items of domestic equipment, should be developed to the fullest possible extent to increase production and to reduce costs. The Government should for this purpose enter into immediate consultations with the industries concerned and some form of bulk purchase machinery may be necessary. All house plans of local authorities should take account of standardised dimensions of domestic equipment so that even if the equipment is not immediately available it can be installed later. [255-259]

Concurrently with the standardisation of building components and equipment, existing building regulations should be co-ordinated and amended to take account of technical improvements with special reference to standardisation and prefabrication. [260]

Prefabrication Experiments in the prefabrication of building components and fittings, *e.g.* plumbing units, kitchen and bathroom units, etc., and of the principal structural elements in the house should be encouraged. Such processes are likely to have far-reaching effects upon speed of building and reduction of costs. [261-263]

DESIGN, LAY-OUT AND AMENITIES

WHAT IS DESIGN?

Good design must express the functions which the building has to perform. Housing design is a field for the specialist and all building authorities should be required to employ an architect. Full use should be made, where necessary, of the powers contained in Section 75 of the Housing (Scotland) Act, 1935. [264-265]

Good design effects economies in construction and its success lies in the use of simple compositions and in the careful proportioning of the essential elements in the house structure. [266]

HOW THE HOUSE SHOULD LOOK

Internally. Simplicity in internal finishing should be the main aim. The development of alternative finishing materials may lead to a greater variety of colour treatment in internal finishings in houses. [267]

Externally. More ingenious use should be made of colour and texture in external finishing materials. [268]

Flat roofs are an alternative to be adopted with discretion but might be used more extensively for flats without detriment to external appearance. [269]

Roof coverings should display a judicious variety. Wherever practicable Scottish slates should be used for slated roofs. Cheap substitutes for slates or tiles are not to be commended. [270]

LAYOUT OF HOUSES AND FLATS

The carriageways of roads and streets in most housing schemes are excessively extravagant in width and should be limited strictly to the volume of traffic which they will require to carry. More skilful use should be made of cul-de-sac development, recessed crescent effects on wider roads and recessed open forecourts with indirect approach to houses. The types of houses to be comprised in future housing schemes and the lengths of blocks of houses of different types should be judiciously varied. The development of the cottage type in longer terraced blocks would be in accord with the best Scottish traditions in domestic architecture and would improve the architectural character of housing layouts in Scotland. [271-274]

The layout of flats requires the most careful consideration. The traditional Scottish practice of building "tenements" in wholly or partly enclosed hollow squares with back greens or "back courts" behind the blocks is to be

deplored. Future schemes of flats should be designed as independent "residential units," with the blocks located, for example, on the site in parallel and the space between blocks tastefully planted. The blocks themselves should be so designed as to be equally attractive in appearance both from the "front" and "back" views. Schemes of flats should be planned to provide adequate playing facilities for the children, communal gardens and other community services such as small community centres, adequate facilities for drying clothes in the open air, communal laundries and drying-rooms, where required. [275]

Balcony access to flats is not commended and flats should not be planned on such a scale that they become "garrisons" or "colonies." Normally, a single scheme of flats should not comprise more than 400-450 flats. [276-277]

DENSITY

Density is primarily a question of town planning, but one special point is mentioned. The application of rigid density formulae to schemes of flats is unreliable and misleading. Schemes of flats properly planned to higher densities are often more satisfactory than schemes badly planned to orthodox densities [278-279]

GARDENS

Cottages Houses for aging or infirm people should have gardens which can be maintained by the local authority, but sufficient ground should be left for allocation to tenants who are anxious and able to cultivate ground for themselves. [280-281]

The rigid application of density formulae often results in the allocation of excessive areas of garden ground to cottages. Gardens should differ in size and in suitable schemes and suitable areas additional ground should be made available in the form of allotments for use by those tenants who want more ground. [282-283]

Flatted Houses Gardens in flatted houses often give rise to difficulties and even friction between tenants. The gardens allocated to each house in the flatted block or terrace should be clearly delineated by the local authority and access should be arranged to take account of the allocation. [284]

Flats Communal gardens should be provided in schemes of flats and should be supervised by a resident caretaker. Schemes of flats should include provision on a limited scale of allotments for those tenants who want them. [285]

OPEN SPACES

Open spaces, particularly playing spaces for children, are essential in all schemes. They should be of reasonable size, suitably equipped, and should be located near the home, without being so small as to become untidy and difficult to maintain. Schemes of flats especially should include such facilities. Recreational space should also be available for adults and there should be ample provision in the larger schemes for bowling greens, tennis courts, etc. [286-289]

The whole question of the most appropriate method of providing recreational open space requires reconsideration on the lines already recommended by the Scottish Architectural Advisory Committee. [290]

COMMUNITY SERVICES

All plans of projected housing development should incorporate provision for community buildings, and the local housing authority should co-operate closely with other authorities responsible for different services, *e.g.* schools, clinics, health centres, libraries, etc., and with the churches, commercial interests, etc. Provision should be made in the plan for the possible expansion of these facilities or the addition of any new facilities. [291-294]

In rural areas housing schemes should be located in such a way as to foster rural community life and should be directly related to the existing community. The derelict areas of some of the smaller rural towns and villages should be developed in preference to the expansion of peripheral areas. [295]

AMENITY—SOME SPECIAL FEATURES

Paths Paths should have an attractive and durable finish, *e.g.* concrete or paving slabs, and should be provided with concrete kerbs. Access paths immediately at the rear of terraced blocks in close proximity to the houses are not to be commended. Such paths should always be located at the foot of the back garden plots. [296]

Fences Low set concrete walls or kerbs are to be preferred to metal railings although fences and gates may be essential in some areas. [297]

Trees The retention of trees already established and the judicious planting of flowering trees and shrubs can enhance the attractiveness

of housing estates effectively and economically and is therefore to be commended. [298]

Treatment of Corner Sites More use should be made of screen walls between blocks, particularly at corner sites, to preserve the amenity and privacy of houses and gardens and to improve architectural design. [299]

Garages Local authorities in appropriate circumstances should not be discouraged from providing garages designed and planned in harmony with housing schemes and grouped together, where the facilities are necessary and the garages will be let at economic rents. [300]

Miscellaneous "Street furniture," *viz.* lamp standards, street nameplates, etc., should be well designed. Seats or shelters, especially in schemes which include houses for aging persons, would be appreciated. [301]

PLANNING THE COMMUNITY

Modern traffic conditions and the increasing demand for recreational facilities, open spaces, and all kinds of community buildings demand a complete reconsideration of the principles of housing layout. The following are the main factors to be borne in mind:

(a) the planning of new housing is an integral part of planning for the whole community; new houses should be grouped in residential zones as "neighbourhood units"; [302]

(b) housing sites should be located in areas free from heavy industry, etc.; [303]

(c) small isolated blocks of houses separated from the main community should be avoided; [304]

(d) housing sites should be segregated from main traffic routes, and necessary service roads and streets in housing schemes should be designed to discourage through traffic; [305]

(e) the routing of service vehicles required to serve housing development should be taken into account in the planning of housing schemes; [306]

(f) open spaces for all purposes should be planned as part of the scheme; [307]

(g) all community buildings should also be planned as part of the scheme and the possibility of future growth should be kept in mind. [308-309]

PART II: SUPPLY OF FURNITURE BY LOCAL AUTHORITIES

PRESENT POWERS

Under Sub-section 2 of Section 43 of the Housing (Scotland) Act, 1925, local authorities are empowered to "alter, enlarge, repair or improve any house so erected, converted or acquired, and may fit out, furnish and supply

any such house with all requisite furniture, fittings and conveniences." Most local authorities in Scotland who have used these powers have done so only to a limited extent.

[345-350]

WHAT SHOULD BE PROVIDED

ESSENTIAL ITEMS

All local authorities should be prepared to use their powers under Section 43 (2) of the Housing (Scotland) Act, 1925, to provide essential items of furniture and furnishings to those tenants of their own houses who need them. Essential items are taken to be beds and bedding, tables, chairs, chests of drawers, floor coverings.

[351-356]

NON-ESSENTIAL BUT DESIRABLE ITEMS

Non-essential but desirable items are taken to be suites of movable furniture, rugs, carpets, space heaters, vacuum cleaners, electric irons, etc. The supply of such items of movable

furniture, as suites of furniture, etc., in the post-war period can best be secured by an extension of the Utility Furniture Scheme under which design, sizes, quality and price are controlled.

[357-363]

Non-essential but desirable domestic appliances, such as space heaters, vacuum cleaners, etc., should normally be supplied by the Power Supply Undertaking so that requisite services for maintenance, etc., can be made available. Local authorities who are also Supply Undertakings can encourage the wider use of these appliances and generally everything possible should be done to ensure the production of these appliances in bulk to standardised patterns and at reasonable cost.

[364-365]

ADMINISTRATION AND ADDITIONAL POWERS

The administration by local authorities of future schemes for the supply of furniture should follow the model of existing schemes. Local authorities should purchase essential items in bulk, should make the furniture available at wholesale prices, plus percentages to cover administrative charges and interest charges where hire purchase agreements are made. The details of the scheme should be subject to the approval of the Department of Health. [366-369]

Items supplied should be capable of being

purchased either by single cash payments or by instalment payments on the basis that the items ultimately become the property of the tenant.

[370-371]

The existing powers of local authorities contained in Sub-section (2) of Section 43 of the Housing (Scotland) Act, 1925, are comprehensive in enabling local authorities to furnish their houses with all requisite furniture, etc. No further powers are therefore recommended.

[372-373]

HOUSE MANAGEMENT AND FURNITURE SUPPLY

Many tenants of local authority houses require help and guidance if they are to enjoy to the full the advantages of the new facilities available in their new homes. Some local authorities have appointed trained women housing managers who can give helpful advice to housewives on the best and most economical way of using the various appliances and fittings with which the new house is equipped. Services of this kind are

to be commended and a wide extension of such services would be welcomed.

[374-377]

In some areas, the local Gas and Electricity Departments of the Local Authority can give demonstrations of the working of domestic appliances but such demonstrations should be supplemented by positive guidance given in the individual home.

[378]

The special management facilities suggested will be of particular value in helping local authorities to deal with the small minority of tenants who are positively neglectful or "difficult." A properly organised system of house management should provide for consideration being given to tenants of this type, even before they have removed from their old homes. [379]

Local authorities in considering the planning, furnishing, and equipping of houses which they will be building after the war should consult with local women's organisations so that they may be kept in touch with the housewife's point of view and practical experience in these matters. [380-381]

POST-WAR PROSPECTS

The furniture industry which has been concentrated during the war should be expanded as rapidly as possible after the war to meet the tremendous demands for domestic furniture which will arise in that period. [382-383]

Local authorities can help to ease the problem of furniture supply in the post-war period by providing as much built-in equipment as possible on the lines suggested in the report. Such built-in equipment should be standardised to secure bulk production and to reduce costs and the necessary measures and consultations should be undertaken at the earliest possible date. The provision of non-standard, *i.e.* movable, furniture in the immediate post-war period requires special consideration. The Utility Furniture Scheme should be maintained for a period after the war to ensure the production of good quality furniture at reasonable

cost and should be extended in the following respects: [384-388]

(i) the range and variety of designs and the types of material to be used should be extended; [389]

(ii) the operation of the scheme should be closely linked up with the activities of local housing authorities and any system of priority permits should be administered in consultation with them; [390]

(iii) local authorities should be entitled to supply "essential items" of furniture in the Utility range. [391]

The control exercised during the war over the prices of second-hand furniture should be maintained in the immediate post-war period and the provision of general powers to control the sale of verminous second-hand furniture should be considered. [392]

NOTE OF RESERVATIONS ON PARAGRAPH 22

by Mrs Jean Mann and Mr F. A. B. Preston

WE, the undersigned members of the Scottish Housing Advisory Committee, regret that we are unable to accept the Report of the Majority in its entirety. We are of the opinion that certain paragraphs of the Report are such that notes of reservation have become necessary. In consequence we beg to make the following observations.

We fully appreciate and concur in the conclusion that the cottage type of dwelling-house is possessed of pre-eminent advantages as a home when compared with other types of housing. We recognise that under certain circumstances and conditions houses of other types should not be disregarded.

We dissent from the observations of the Committee in regard to the paragraph on multi-storeyed flats (para. 22). In our opinion this question is closely associated with the question of the most appropriate distribution of houses which the Scottish Housing Advisory Committee is at present investigating. It may be that had the Committee completed the report on "the most appropriate distribution of houses in the immediate post-war years" they would not have found it necessary to recommend a step which the Royal Commission on the Distribution of the Industrial Population agreed "should not be encouraged."

We had hoped that no recommendation, however negative, would have been included in the Report in respect of flat development above six storeys, however well provided with lifts or other modern facilities these flats might be. We are of the opinion, that only in exceptional circumstances, should flats be built above *three* storeys, and in no case above six storeys. Where in these circumstances it is found essential to build six storeys, the upper three storeys, at least, should be reserved for single people and households without children. We refer to page 73 of the Barlow Report, where the conclusion is reached that—"There can, it is thought, be little doubt, that for young children, residence in the higher floors is undesirable."

There is attached to the Report in Appendix 3, a Digest of replies received as the result of a Questionnaire issued to 15,634 persons in H.M. Forces and Industry. This Survey reinforces our attitude. The analysis shows that 90 per cent. of those in H.M. Forces and 85 per cent. of the Workers in Industry who answered the questions

agree that high flats should be given to single persons and families without children. For the recommendation of the Committee the backing is 1 per cent. of those in H.M. Forces and 4 per cent. of those employed in Industry.

In respect of flats above six storeys it is noteworthy that the percentage of Workers in Industry who voted for ten-storey flats was 0 per cent. The highest percentage of those voting both in H.M. Forces and in Industry stopped at the six-storey level. This question related specifically to flats with lifts. In this connection it should be noted that of those questioned in towns, only 14 per cent. in H.M. Forces and 15 per cent. of industrial workers desired modern flats at all, while those living in the country registered 1 per cent. and 2 per cent. respectively for flats.

We regret that while the Committee acknowledge the widespread demand for the detached cottage, they should state that "from the point of view of economy in land and services, the proper disposition of layout, etc., we cannot contemplate that the majority of houses in future housing schemes will consist of detached dwellings." This statement in our opinion is not so disquieting as the recommendations which follow in regard to multi-storeyed flats which *they can contemplate* as appropriate. We feel these statements denote that they have overlooked the radical changes foreshadowed in the Barlow, Scott and Uthwatt reports.

In disagreeing with the Committee, our divergence is not based solely on the Survey, although we regard that information as of primary importance, but our objections are more deep-seated and we might summarise them as follows:

- (1) Crowding of houses and population and its effects on Public Health and Mortality Rates.
- (2) The northern Scottish climate and its appreciable lack of sunshine.
- (3) The nerve strain and noise due to the nearness of neighbours in such houses.

We refer to the Public Health aspects.

We note that references have been frequently made to New York and Continental multiple-storeyed housing. The inference appears to be

that this practice should be copied in Scotland. We feel that those who have advocated this move have not given sufficient consideration to the differences of climate, sunshine and the nature of the soil in many of our Scottish towns. We refer to the Memorandum of Evidence presented by the Royal College of Physicians of Edinburgh to the Sub-Committee on Housing Design of the Scottish Housing Advisory Committee in May last, and draw your attention to the following paragraph:

“*Tenements*—The College are of opinion that the tenement is an expedient to be adopted only under duress of circumstances, such as limitation of building sites, proximity to work, and the easement of travelling to and from work, etc. Where the tenement type of dwelling has to be adopted, the building should not be of more than three storeys and no shops should be allowed to be built in the block. In the interests of health no families with young children should be allowed to be tenants in such dwellings, and as far as possible the ground floor houses ought to be reserved for elderly or disabled persons. In areas where there is a demand for the housing of young unmarried persons, a few of the houses on the top storey of the tenement could be held in reserve for them.”

Evidence submitted by the Housing and Town Planning Committee of the Scottish Branch of the Institution of Municipal and County Engineers contained the following statement: “The tenement with the common entry either by close or balcony, should only be used where circumstances warrant it and it should be limited to three storeys in height. Special circumstances may call for a relaxation of this last proviso in larger towns.” In evidence submitted by the Sanitary Inspectors Association of Scotland the following appears:

“Tenements are not recommended but where circumstances necessitate their erection these should, as a general rule, be restricted to three storeys.”

We have had opportunities extending over a period of years of visiting large blocks of modern flats erected by various local authorities in England. These blocks of flats, while they have impressed us with their architectural qualities, have not recommended themselves to us as an ideal solution to the housing problem, yet they have made a contribution to the redevelopment of central areas. The London County Council have generally limited redevelopment by blocks of flats to five storeys, while for the Ossulston-Street area, St. Pancras, the centre block is of six floors. This practice has been followed by the Liverpool Corporation where five storeys

appear to be general upper limit, except where six storeys are adopted as an architectural feature at the main entrance to Gerard Gardens Rebuilding Scheme completed in 1935.

The problem presented by redevelopment on these lines was considered by the Barlow Commission and with reference to our objection “the nerve strain and noise due to the nearness of neighbours in such houses” and industry, the following comment appears on page 78 (Barlow Report) quoting from a report by a Commission appointed by the Commissioner of Health in New York City in 1931—“In the attempt to overcome the effects of noise, great strain is put upon the nervous system, leading to neurasthenic and psychasthenic states. Noise interferes seriously with sleep, even if a few become tolerant. The normal development of infants and young children is seriously interfered with by constant loud noises. Unfortunately, there is no evidence that noise associated with industrial life is diminishing. There can, however, be no doubt that the population can be protected in large measure from its effect by enlightened Town Planning and Decentralisation. The same is true in regard to smoke.”

The recommendations of the Committee appear to have been arrived at by consideration of what is practicable at the moment and without full regard to the need for decentralisation, as would result from a balanced planning policy for the whole of Scotland, which we regard as essential if highly overcrowded areas are to be properly dealt with by other means than a simple re-shuffle of their population into multi-storeyed flats. We wish to stress the obvious disadvantages of any failure to restrict upper storeys of flats to adults only.

The provision of communal facilities has been referred to in detail in the Report. We would like to record that there is a great reluctance on the part of Scottish people to take advantage of communal facilities. To revert to the answers resulting from the questionnaire, it should be noted that 97 per cent. of those in H.M. Forces and 95 per cent. of industrial workers desire a private garden and that 81 per cent. and 85 per cent. respectively object to communal gardens even if kept by the local authority. The percentage is even greater against gardens kept up jointly by the tenants.

While appreciating that the Report and the plans attached thereto provide for washing facilities in individual tenement houses we remain of the opinion that multiple-flatted houses, as regards houses above the third storey, place on the housewife a considerable disadvantage as regards drying facilities. The higher above the ground floor level that a house-

hold is lodged these burdens become more acute in respect of:

(a) distance between house and green (whether by stair or lift);

(b) difficulty in securing equitable and workable arrangements between tenants;

(c) increased lack of protection afforded the more remote tenants in respect of their washing while drying through distance and time taken up between house and green.

In the English flats which we have inspected we observed these real difficulties and noted the tendency of, at least a proportion of, tenants to dry their wet clothes indoors. The provision of drying space on flat roofs of large blocks or in passages or covered spaces between upper floors tends to add to the cost of building and detracts from the amenity and convenience of the blocks where these are adopted. Admitting that consequential on the small numbers of persons favourably answering the questionnaire in respect of flats only 8 per cent. of those in

Industry and 15 per cent. of those in the Forces desire wash-houses serving a group of houses, nevertheless we submit these returns are themselves significant and underline the lack of enthusiasm for the communal type of wash-house as against individual home facilities. We note also from the Survey that the great majority of those answering the questionnaire have a preference for the communal facilities, not necessarily attached to multi-storeyed flats, *i.e.* Public Libraries, Health Clinics and Day Nurseries. Communal restaurants attached to houses, flats, etc., and communal kitchens record the lowest vote.

We emphasise this because we feel that the Scottish people are not necessarily unsociable but are possessed of a sound instinct for the many occasions when privacy is desirable, if not necessary, and we feel that the proffer of communal facilities does not dispel the well-known disadvantages attached to this form of life.

(Signed) Jean Mann
Frank A. B. Preston

NOTE OF RESERVATION ON PARAGRAPHS 278-279

by Mrs Jean Mann and Mr F. A. B. Preston

Density

WE agree with the statement contained in paragraph 278 that density is a question of town-planning. We consider that it should have primary consideration before recommendations in regard to any particular types of houses are made.

Whilst briefly dismissing the consideration of density in paragraph 278 the Committee make the following statement in paragraph 279: "Many schemes of flats of comparatively high density were so disposed on the site and were provided with such community services that they were in all respects superior to other schemes of lower density which simply left bleak expanses of open space behind and around the flats." We cannot agree with this statement in so far as it confuses density with site planning. We have observed many well laid out open spaces conjoined with high flats tramped into mud and in a state of chronic unsightliness. This condition cannot be entirely dissociated from high density in the immediate surroundings.

While density is commonly regarded as a difficult problem and therefore frequently evaded, the time has come when attention should be clearly focussed on the subject.

Congestion and disease alike spring from overcrowding, frequently aggravated by over-building and the over exploitation of land. Density properly applied is one index of healthy living and good social amenity.

Dissenting from the statement and conclusions as set out in paragraph 279 of the Report, we note that no definition is given to clarify the phrase "rule of thumb density formula" which is condemned as a most unreliable guide. This paragraph should not, although there is a risk that it may, be regarded as favouring a departure from the inclusion of density in any new Housing and Town Planning requirements. From the enquiries we have been able to make we strongly recommend that in relation to housing a full review of density control should be undertaken with the least possible delay. The density of permanent houses cannot readily be modified once they have been erected. In anticipation of the vast Scottish house building programmes, private and public, for the immediate post-war years, such a lead well merits any expenditure of effort that is involved.

(Signed) Jean Mann
Frank A. B. Preston

NOTE OF RESERVATIONS ON CHAPTER VIII

by Mr F. A. B. Preston

HAVING, in common with the other members of the Committee, subject to a joint dissent regarding the provision of multiple-flatted houses and questions of density, generally approved of the terms of the Report, I respectfully make the following reservations with reference to Chapter VIII thereof:

There is inherent in the provision of post-war housing the need for urgency. The Committee in making recommendations in respect of the design of new houses on a long-term policy recognise that coincident with this is a need for the provision of houses on a short-term basis apart from housing of a purely temporary character.

The provision of all houses, of whatever class, requires the expenditure of skill, labour, material and money. This leads to the desirability of a close enquiry into the best and most profitable expenditure of these essential items. From this there emerges the problem as to whether approval shall be given to the building of houses of a definite limited life under relaxed regulations and with materials of inferior durability. Building of houses of whatever type or standard of construction will absorb labour and material. The labour thus absorbed will be taken from the restricted pool available for building whether long or short term, likewise the material will be taken from stocks that will doubtless be in short supply for a considerable period.

I am in agreement with the Committee in emphasising the importance of the enquiries, presently being carried out by the Committee on House Construction, under the chairmanship of Sir George Burt, into alternative methods of building including prefabrication. I concur in the desirability of the Burt Committee considering the possibilities of adopting, in the immediate post-war years, demountable prefabricated structural methods for the production of transitional houses. Unfortunately an anticipated interim report of the Burt Committee is not yet available. The Committee in order to complete their Report on Design concluded their enquiries without awaiting the Burt Committee's replies to their queries into "the whole question of transitional houses," or if a satisfactory answer was not found to this into "the most expeditious method of converting war-time buildings for housing purposes on the lines of the plans" incorporated in the Report.

The short-term plans, prepared for the Committee, incorporated in the Report, may be utilised by adaptation for various types of construction including materials of similar lasting qualities to those suitable for long-term construc-

tion. I have to suggest that a decision be reached, without unnecessary delay, as to the life to be aimed at in respect of building from these modified type plans. If they are to be of a life approximating to those erected between the two German Wars their external design as well as their internal finishing and equipment should be regarded on that footing.

I fully agree that all practicable steps should be taken with reference to the speedy contracting for and the erection of houses. Some quicker procedure should be adopted in the earliest stages of the great housing programme. I am not in full agreement with the arguments put forward with reference to the delays commonly experienced in commencing actual constructional work in the past. The sole cause of delay does not rest on what has been termed orthodox methods of planning and pricing. Delays not infrequently occurred in respect of checking and obtaining approval of plans and authority for the acceptance of tenders by local authorities. The procedure in respect of this phase is, I submit, one for your consideration.

The architectural design of the houses which will be so urgently required in the immediate post-war years is of pre-eminent importance. In order to emphasise the recommendations contained in paragraph 7 of the Report relative to design I reiterate that these houses should attain "standards of quality in design, accommodation, planning and equipment which posterity will judge worthy of the ideals and aspirations of our time and not unworthy of its own." Having regard to this earnest expression of opinion and also respecting the recommendation that a Specialist Committee should be set up to consider the advisability of what might be termed "model" designs for the guidance of local authorities, I trust that the terms of reference of any committee which it may be decided to appoint on the basis of this recommendation will be wider in scope than those envisaged in the recommendation. Such a committee should, in my opinion, be asked to consider the whole question in its widest aspects; I therefore submit that they should not be precluded from investigating the desirability of architectural advice being secured from sources other than an architectural panel by way of architectural competition or in some other manner considered more suitable and appropriate.

The face of Scotland will be transfigured by the out-carrying of the vast housing programme which is envisaged. Architecture is not a static preoccupation, but, at its best, develops new

traditions to meet the changing needs of human development and building technique. I suggest that as we may well be approaching, through trials and profound effort, a new high level of national attainment no opportunity should be lost in order to secure expression of this in our domestic architecture. The present is a period of architectural transition which with wise guidance may produce new styles commensurate with the needs of the new age and peradventure not entirely forgetful of local traditions and the grafting of the new to the old.

The further suggestion regarding the mode of fixing of prices and the checking of building

material rates is, I suggest, a thing apart from the preparation of model plans. This might well be referred to a permanent body insulated from building trade interests and political changes alike. Outstanding differences in costs brought about by geographical location and other special conditions might be so remitted for investigation. To such a body could be referred the review of subsidies and the general overlook of post-war housing in relation to its general progress, reporting periodically thereon to the Secretary of State as occasion required.

(Signed) **Frank A. B. Preston**

DISSENTIENT MEMORANDUM

by Mrs Jean Mann

I REGRET that on a matter of vital principle, I find myself at the outset at variance with my colleagues on the wider aspect of the types of houses which they recommend or agree "may be appropriate." I can only assume that certain types are appropriate under certain conditions and that their outlook has been narrowed to the continuation of the present conditions, *i.e.* congestion in the large cities; sparsity of population elsewhere throughout Scotland. Apparently their recommendations relate to replanning the population within the present framework; otherwise it is difficult to see why they should admit that "the overwhelming balance of preference is in favour of the Cottage" (paragraph 9) and then "from the point of view of land and services," ignore the preferences revealed in the Survey.

Whilst denying fulfilment of the widespread demand for space and privacy the Committee have aimed at increasing the mechanical utilities within the house, thus completely justifying Mumford's * statement "as the mechanical utilities within the house have multiplied, living space has shrunk" and I find myself supporting his conclusion "It is land values, or mechanical contrivances that must fall, not the family dwelling standards."

At a period in the history of our country, when the declining birth rate is rightly giving such grave concern, I feel that the calm acquiescence of allotting multi-storey flats to families with young children will speed this decline.

Young couples will stop at one child, however, afterwards we, and they, may regret it.

It is with alarm I have noted the paragraph (277) recommending that these blocks "should comprise not more than 400-450 flats" but "*it is not, of course, implied that a single site or area suitable for the development of flats*

should not contain more than this number of flats."

The worst feature of this paragraph is that it lays some stress on playgrounds and community services (which may, or may not, be provided), completely ignores space and angle of sunshine, and gives unbridled licence in the matter of density. A most disquieting factor is the well-known fact that the figures 400-450 flats in relation to ten-storey flats are known to have been widely canvassed on "economic" grounds, *i.e.* it pays to build really high; it pays better to bring material and equipment to the site for flats of not less than 400-450. Blocking out the sky-line, lack of sunshine, mixing the classes in too close proximity, the effect on the mortality rates, of this well-canvassed procedure, appear to be completely ignored. There is no promise in these proposals of a better balance of population throughout Scotland, and whilst reference is made to the desirability of redeveloping the derelict areas (paragraph 295) one is left guessing where the population is to come from, that is to redevelop and revitalise those areas, if the congestion of our towns is to remain, and the people merely reshuffled skywards.

Throughout the report there are numerous commendable recommendations amplifying equipment, contrivances, fittings, and furniture but in regard to the broader aspect I find myself in complete agreement with Lewis Mumford again, "The planning of a life-centred environment for the family is the primary task in urban rehabilitation. When a choice must be made it is better to have the essential elements for family living, combined with relatively primitive accommodation, rather than to have the last refinements in technology, the electric refrigerator, a constant supply of hot and cold water, fireproof construction, without the space and

* Lewis Mumford (New York) *The Social Foundations of Post-war Building*.

privacy a family needs." (There is no reason, of course, why such a choice should be necessary.)

The other recommendations with which I dissent are not so vital in principle, and I summarise them thus:

(Paragraph 29) Single Women

I do not agree that single women should be segregated from the rest of the community, and I strongly oppose the suggestion that their choice of new living conditions should depend "on the number of one- and two-apartment houses likely to become available." These will not be available for many years and in the large cities such houses are generally situated in districts which many single women have all their lives avoided. I think single women should be provided for in new Housing Development, in the upper storeys of flats. It was only this consideration that prompted me to support flats above three storeys. Modernised flats in certain central districts may also be appropriate for women who desire to be near their work.

(Paragraph 147) Lifts

The Committee do not appear to recognise that there may be a great temperamental difference between Scottish and English children, and I cannot agree that the fears expressed in regard to lifts would prove "groundless" in Scotland. In any case I do not agree that children should be placed in high flats at all.

(Paragraph 235) Steel Clad Houses

I dissent from the satisfaction expressed in the technical reports regarding these houses, and regret that the Committee did not visit some of the tenants in the Glasgow areas, where widespread demands for transfers from steel houses, on numerous grounds, chiefly medical, eventually led to a decision debarring further transfers. It is known that throughout the period of acute shortage prior to the War, the only available modern small houses to let were those of the steel-clad variety.

(Paragraph 269) Flat Roofs

I cannot agree that the undulating features, contours, angle of sunshine, of this country, lend beauty or enhance the architectural value of flat roofs. They are particularly objectionable in smoky cities.

HOUSE PLANNING

It is probably true that the architect has not yet emerged who can plan a kitchen to suit all women. On certain aspects of this thorny subject I would add the following comments:

(Paragraph 68) Utility Room

I regard this recommendation as more acceptable to those housewives who employ

help on washing day. The average housewife has to keep her eye on the cooking, and watch the children in the living-room, answer the door, etc., whilst she washes. The Utility Room removes her farther from the kitchen, living-room and front door and in my opinion makes the task more irritating. The floor area, 40 square feet, is too small for all the equipment and purposes suggested, and has the additional disadvantage of leaving only 70 square feet for the kitchen proper.

(Paragraph 114) Back-to-Back Grate

The Committee object to what they term "Duplication" of cooking facilities, and appear to overlook the fact that in the case of the "Back-to-Back" it is the living-room fire that supplies the heat. This, in my opinion pre-eminently avoids duplication, in that one fire heats two apartments. The solid fuel is used in the living-room, not the *scullery*, as stated in this paragraph, and this one fire is sufficient for both heating, and cooking in, the kitchen.

Further it is clear from further references that the Committee recommend extensions to the kitchen, i.e. Utility Room and Dining Annexe: some form of heating, in addition to cooking, would appear to be necessary, and duplication would be unavoidable.

(Paragraph 118) Gas v. Electricity

From my experience of audiences of women throughout Scotland, the demand for gas for cooking purposes is exceptionally keen. It is quicker for tea and boiling, more easily regulated to the fraction required for grading according to size of pot, etc., and for soups and porridge (our National diet) gas is preferred. I should prefer that the choice remain with the housewife.

DINING ANNEXE

It is now recognised that a certain amount of meals are consumed in the kitchen, but these in the main are generally of the make-shift variety necessitated by haste, and too much regard for the living-room to sit down in working clothes.

The provision of a dining annexe in the kitchen is a positive encouragement to sit down and have meals in an apartment that can never be regarded as satisfactory for a comfortable meal. Again, the floor area of the kitchen proper is reduced to "70-80 square feet."

I think, from the widespread opinions to which I have had access, that most women prefer the square kitchen of about 130 square feet and want the intimate planning of this to be left to themselves.

My chief criticism is that in these smaller matters the Committee have overplanned, and that in the larger vital issues they have not recognised the need for planning.

(Signed) Jean Mann

MODEL PLANS

illustrating the recommendations
contained in the Report

The plans are arranged in two series :

(i) " S " series (9 plans)—the short-term plans

(ii) " L " series (12 plans)—the long-term plans

INDEX TO THE PLANS

" S " Series

" L " Series

Plan No.	Description.	Area in sq. ft.	Plan No.	Description.	Area in sq. ft.
1 S	3-apartment single-storey cottage .	723	1 L	Single-storey cottage for aging or single persons—with living-room and bed alcove	494
2 S	4-apartment single-storey cottage .	863	2 L	3-apartment single-storey cottage .	817
3 S	3-apartment double-storey cottage	753	3 L	4-apartment single-storey cottage .	1,042
	4-apartment double-storey cottage	871	4 L	4-apartment double-storey cottage .	1,176
4 S	4-apartment double-storey cottage	936	5 L	4-apartment double-storey cottage .	1,114
5 S	5-apartment double-storey cottage	1,052	6 L	4-apartment double-storey cottage (with pend)	1,183
6 S	3-apartment flatted house	760	7 L	4-apartment flatted house	1,055
7 S	4-apartment flatted house:	900	8 L	3-apartment flat: upper floor flat (with lift)	768
8 S	3-apartment flat: ground floor . .	773	9 L	4-apartment flat with verandah balcony	1,115
	4-apartment flat: upper floors . .	908	10 L	4-apartment flat with drying balcony	1,115
9 S	Transitional 3-apartment house . .	545	11 L	5-apartment double-storey semi-detached cottage: living-room; 4 bedrooms	1,240
	intended for temporary occupation (paragraphs 328-329 ; 336-339)		12 L	5-apartment double-storey semi-detached cottage (parlour type): living-room; parlour; 3 bedrooms	1,240

NOTE.—The area in square feet shown on each plan has been calculated in accordance with the Rules of Measurement laid down in Scottish Board of Health Circular H. & T.P. No. V 1924 which for convenience of reference are set out at the end of this Appendix (page xvi).

KEY TO ABBREVIATIONS USED ON THE PLANS

B.Al. Bed alcove.	l. Larder.
BA. Bathroom.	lin. Linen cupboard.
B.R. Bedroom.	L.R. Living room.
b. Broom cupboard.	o. Space for copper or washing machine.
c. Cooking stove.	P. Porch.
ch. China cupboard.	PAR. Parlour.
cts. Coat cupboard.	pr. Pram.
D.A. Dining annexe.	r. Space for refrigerator.
D.B. Drying balcony.	s. Sink.
dc. Drying cupboard.	sc. Shelved cupboard.
dgs. Dry groceries store	t. Tub.
f. Fuel store.	U.R. Utility room.
gs. General store.	w. Wardrobe.
H. Hall.	wt. Worktable cabinet.
K. Kitchen.	

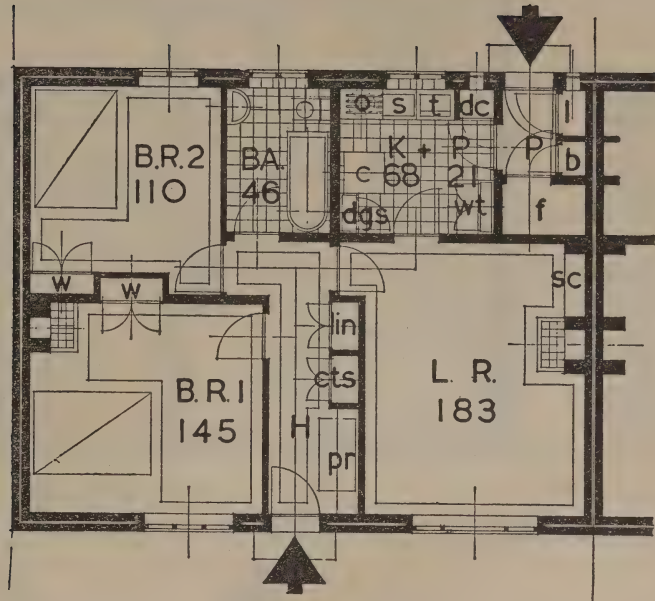
NOTE. The area of the back porch includes all the storage entered off the porch with the exception of the fuel store.

SHORT-TERM PLANS

PLAN 1 S

SINGLE STOREY
3-APARTMENT
HOUSE

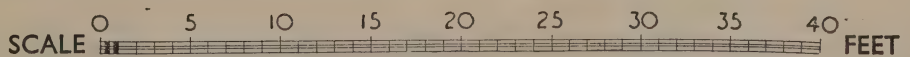
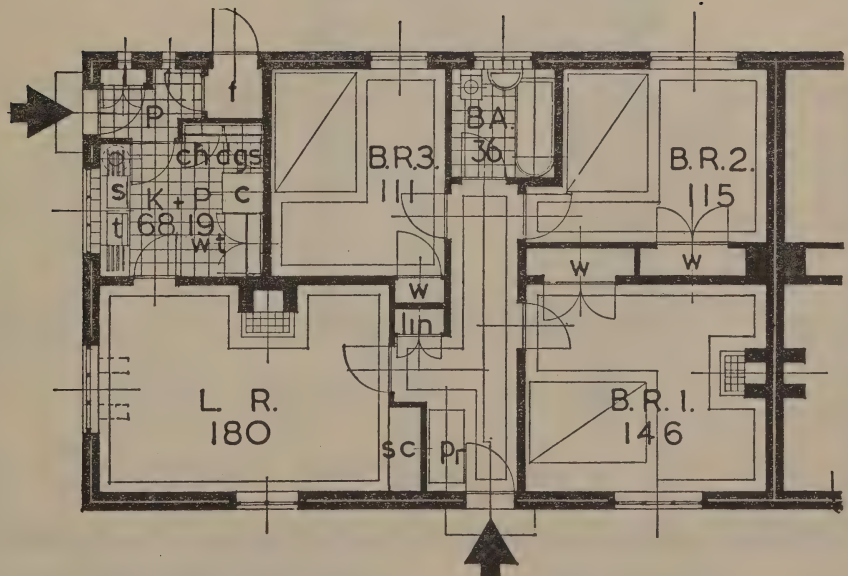
Accommodation : 4 persons
Overall area : 723 square feet



PLAN 2 S

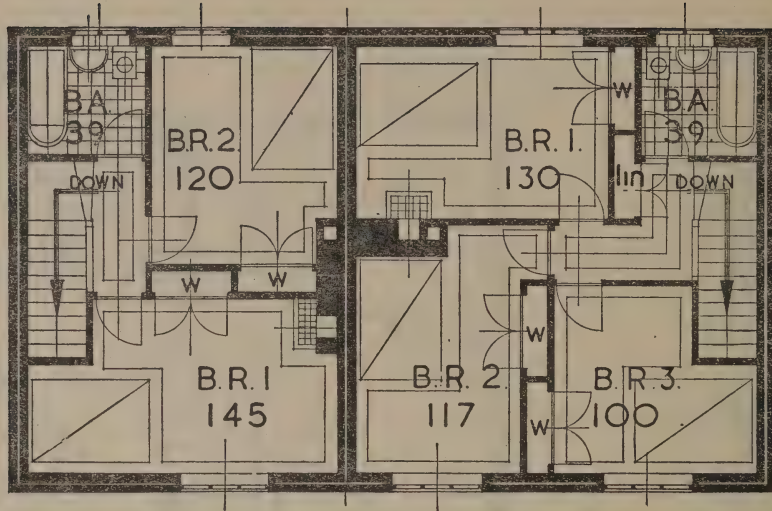
SINGLE STOREY
4-APARTMENT
HOUSE

Accommodation :
6 persons
Overall area :
863 square feet

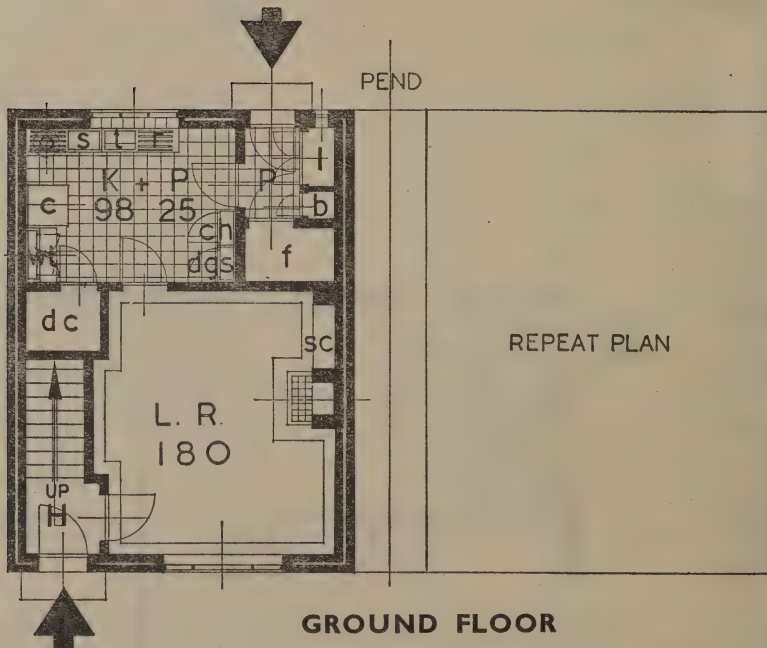


SHORT-TERM PLANS

PLAN 3 S



FIRST FLOOR

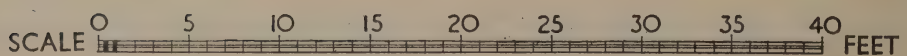


GROUND FLOOR

3- and 4-APARTMENT HOUSES (Pend Type)

Accommodation : 4 and 6 persons

Overall area : 735 and 871 square feet

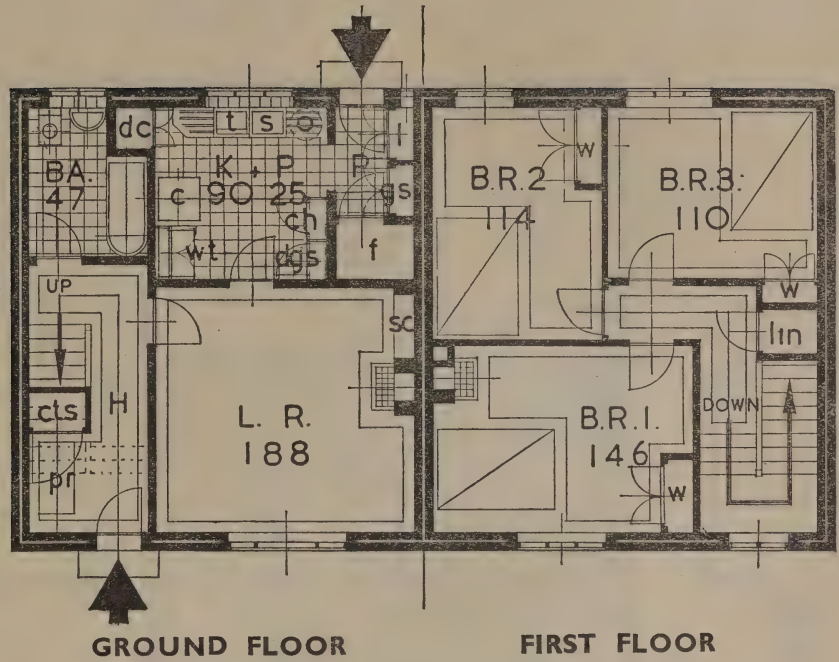


SHORT-TERM PLANS

PLAN 4 S

4-APARTMENT HOUSE

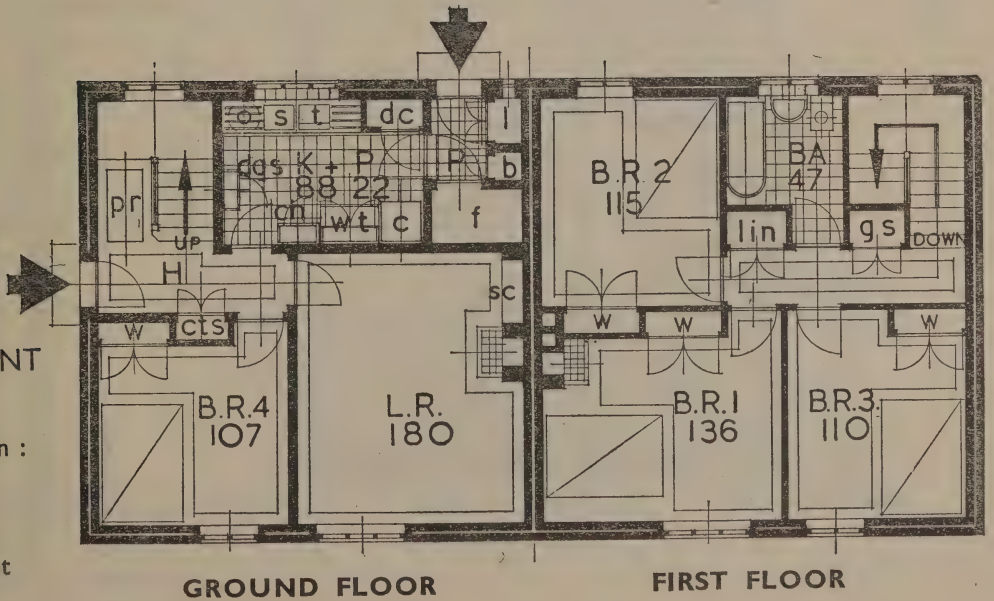
Accommodation : 6 persons
Overall area : 936 square
feet



PLAN 5 S

5-APARTMENT HOUSE

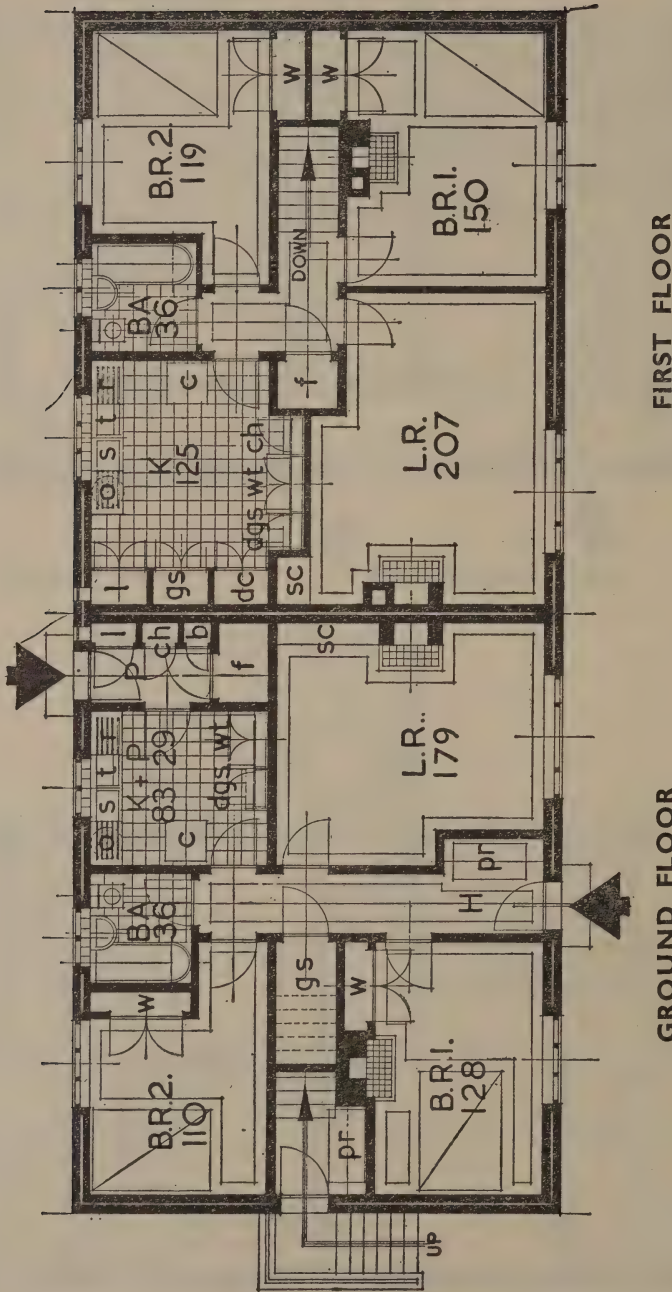
Accommodation :
8 persons
Overall area :
1052 square feet



SCALE 0 5 10 15 20 25 30 35 40 FEET

SHORT-TERM PLANS

PLAN 6S



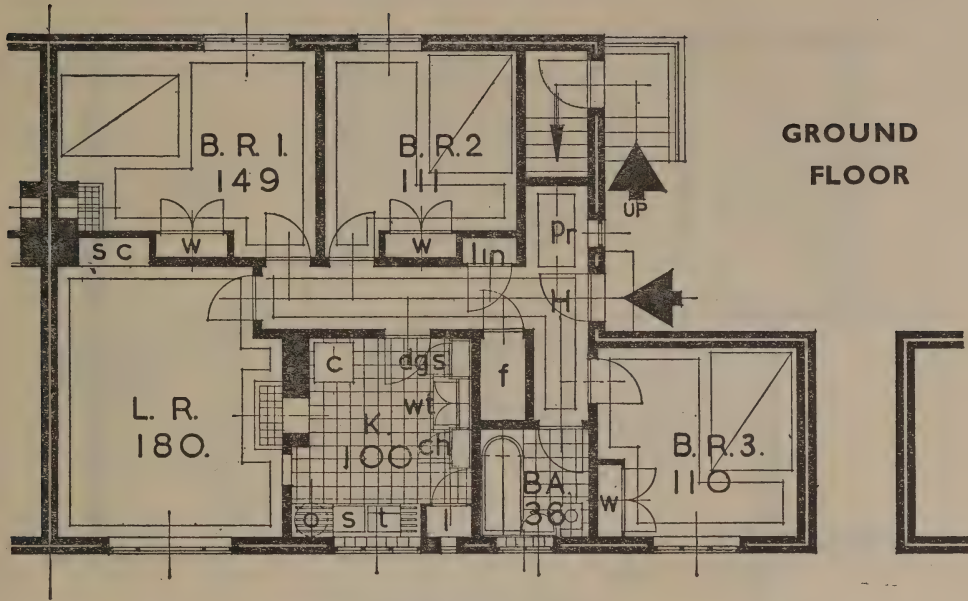
3-APARTMENT FLATTED HOUSE

Accommodation : 4 persons

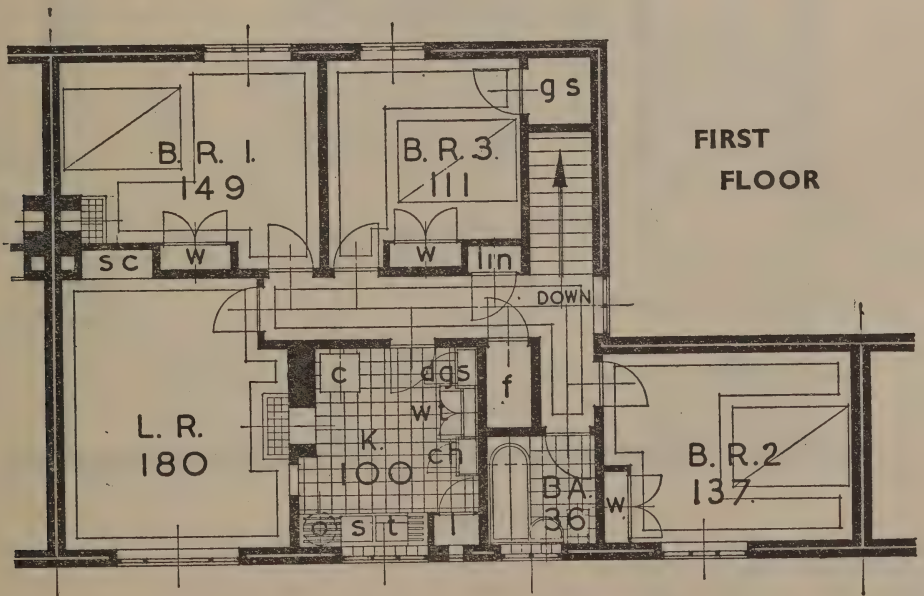
Overall area : 760 square feet

SHORT-TERM PLANS

PLAN 7S



4-APARTMENT FLATTED HOUSE

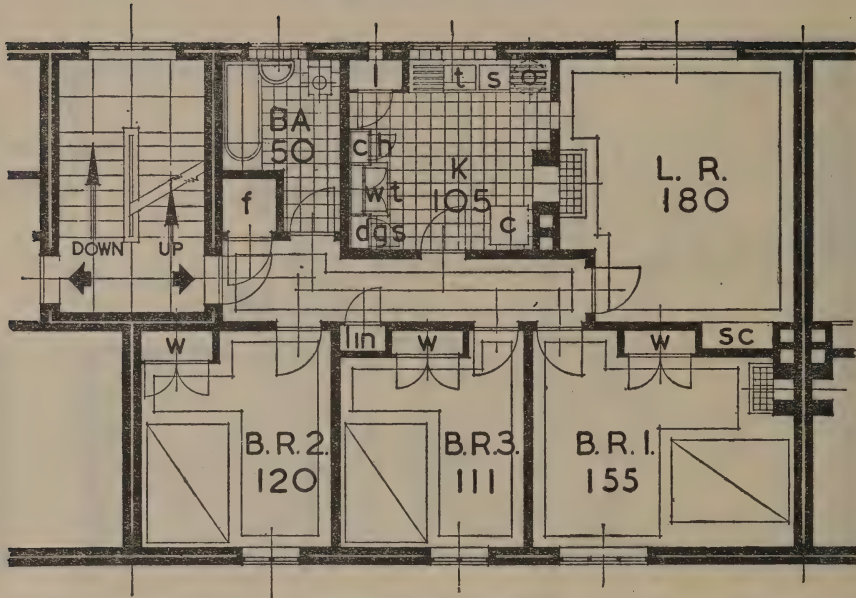


Accommodation : 6 persons
Overall area : 900 square feet

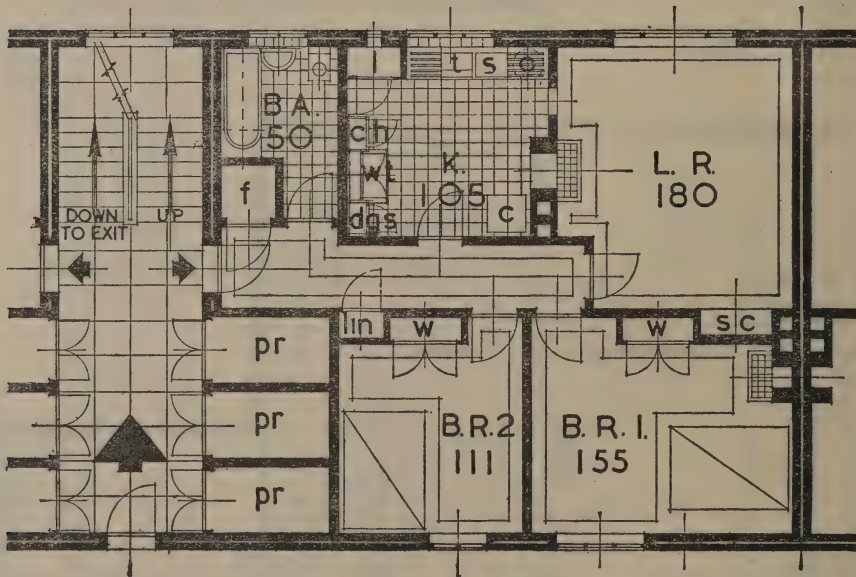
SCALE 0 5 10 15 20 25 30 FEET

SHORT-TERM PLANS

PLAN 8S



FIRST FLOOR

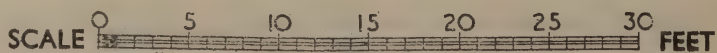


GROUND FLOOR

3- and 4-APARTMENT FLATS

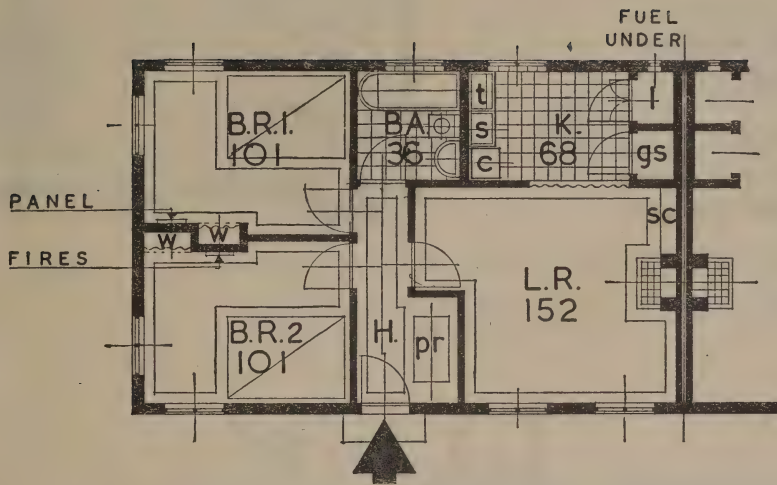
Accommodation : 4 and 6 persons

Overall area : 773 and 908 square feet



SHORT-TERM PLANS

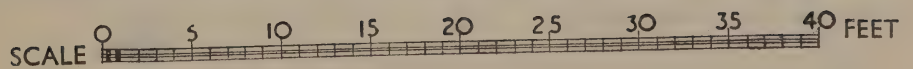
PLAN 9 S



TRANSITIONAL 3-APARTMENT HOUSE

Accommodation : 4 persons

Overall area : 545 square feet

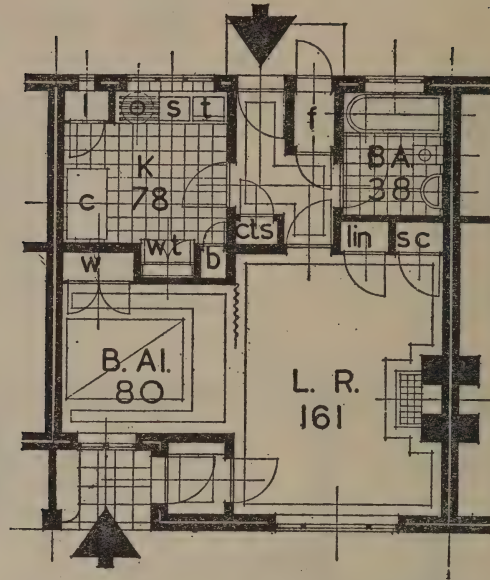


LONG-TERM PLANS

PLAN 1 L

HOUSE FOR AGING
OR SINGLE PERSONS

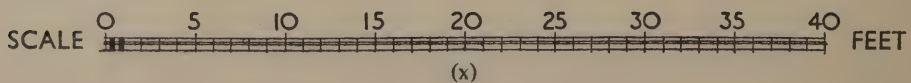
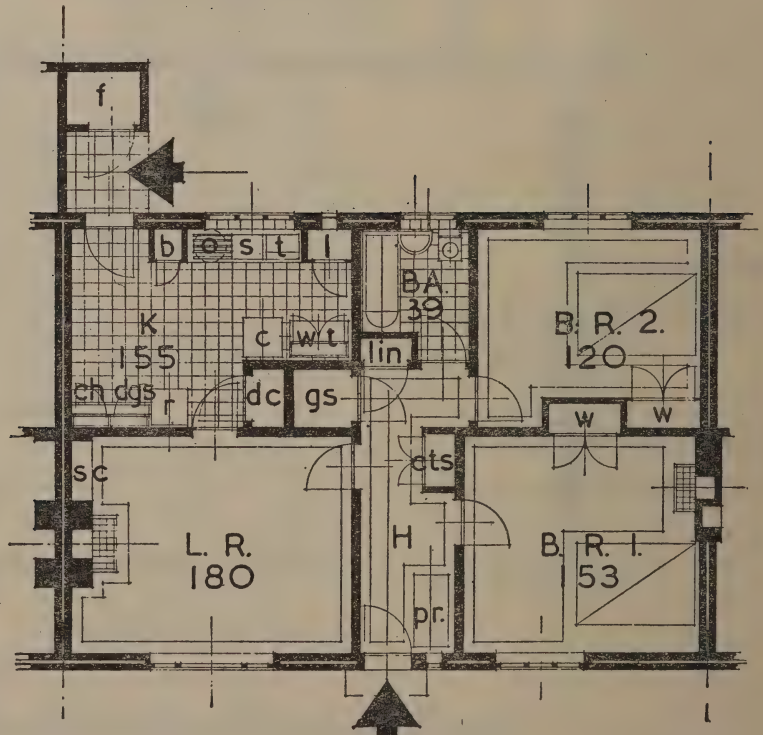
Accommodation : 2 persons
Overall area : 494 square feet



PLAN 2 L

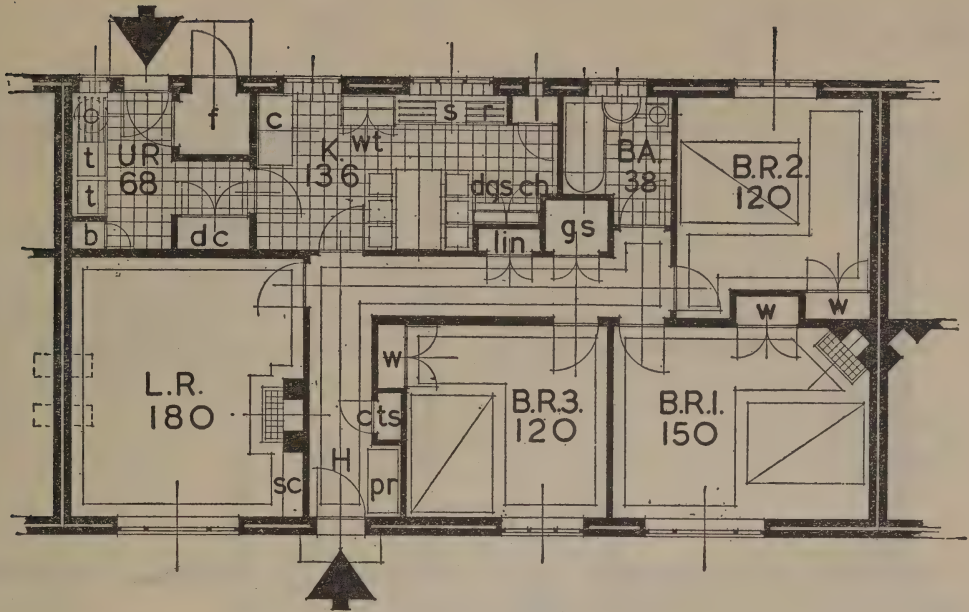
SINGLE STOREY
3-APARTMENT HOUSE

Accommodation : 4 persons
Overall area : 817 square feet



LONG-TERM PLANS

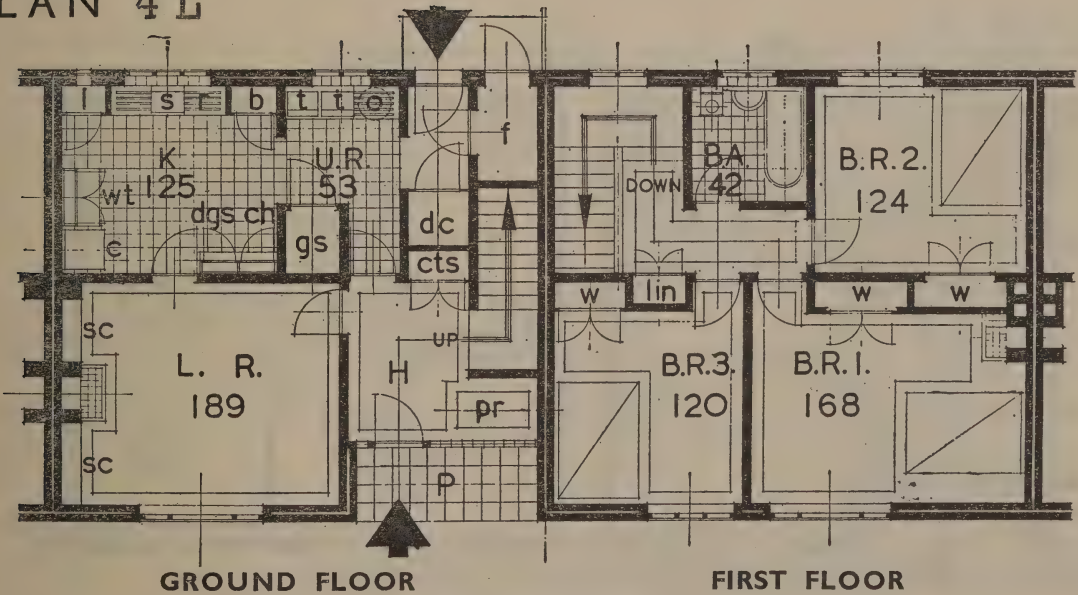
PLAN
3 L



4-APARTMENT HOUSE—SINGLE STOREY

Accommodation : 6 persons Overall area : 1042 square feet

PLAN 4 L

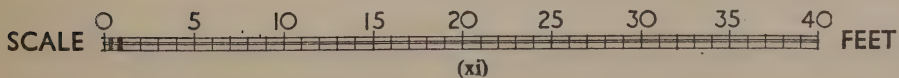


GROUND FLOOR

FIRST FLOOR

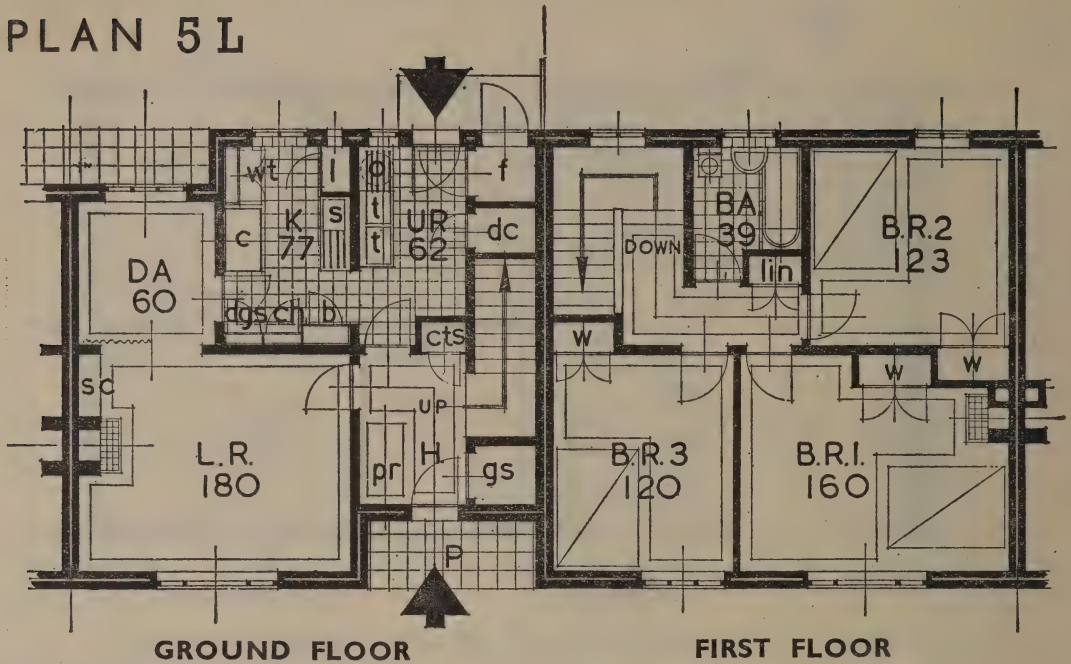
4-APARTMENT HOUSE

Accommodation : 6 persons Overall area : 1176 square feet



LONG-TERM PLANS

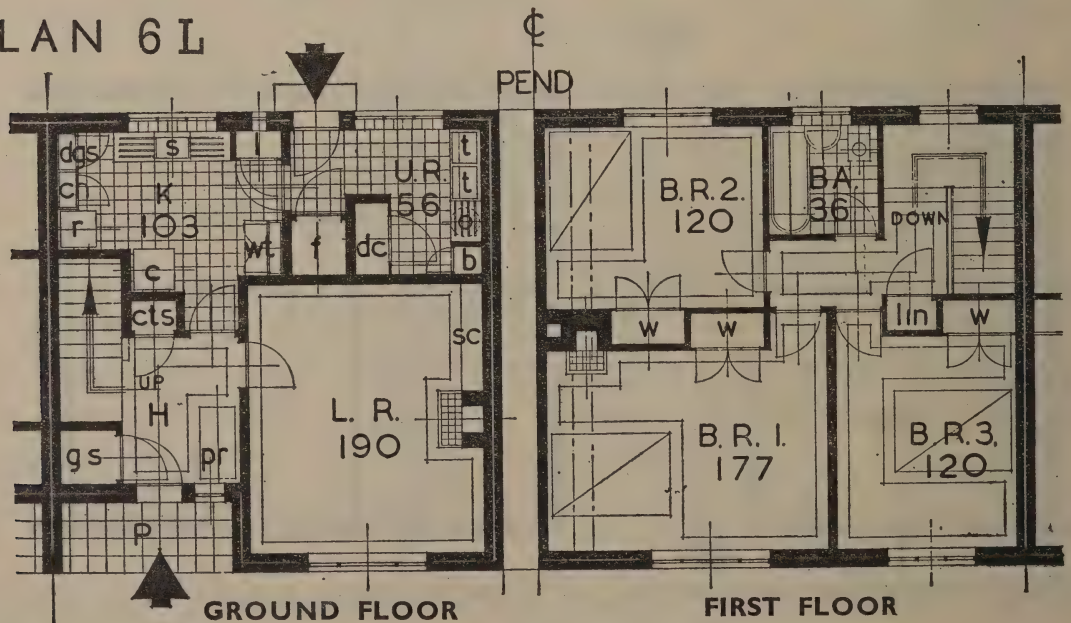
PLAN 5L



4-APARTMENT HOUSE

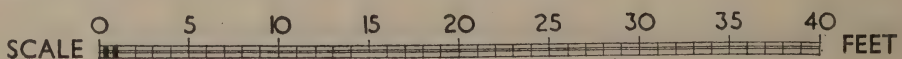
Accommodation : 6 persons Overall area : 1114 square feet

PLAN 6L

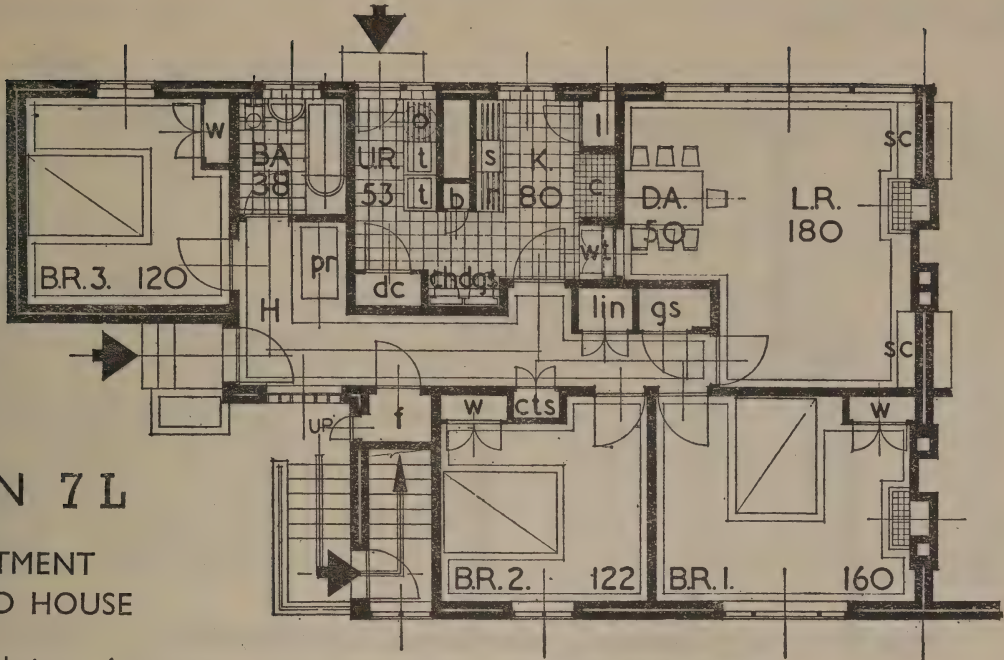


4-APARTMENT HOUSE (Pend Type)

Accommodation : 6 persons Overall area : 1183 square feet



LONG-TERM PLANS



PLAN 7L

4-APARTMENT FLATTED HOUSE

Accommodation : 6 persons
Overall area : 1055 square feet

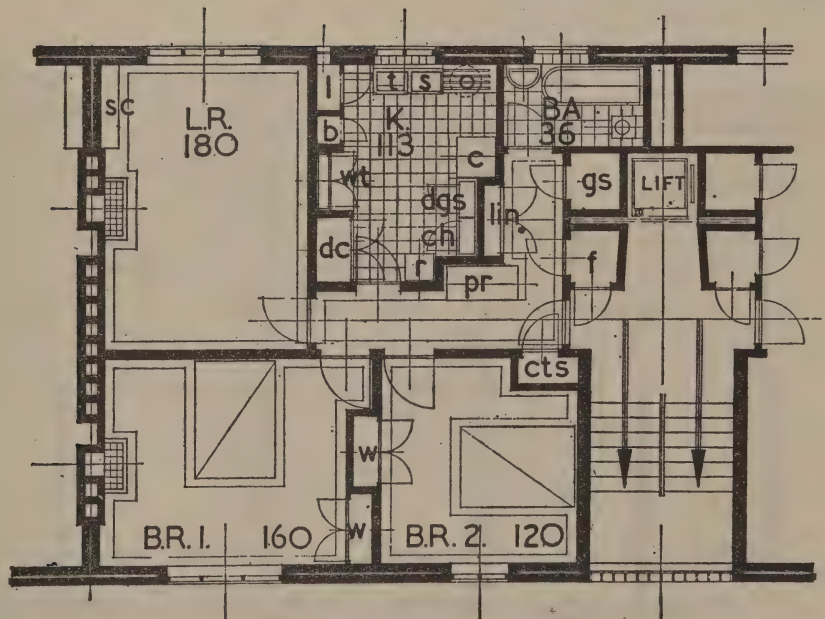
GROUND FLOOR

PLAN 8L

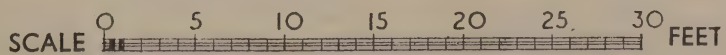
3-APARTMENT FLAT

(Over three storeys—
with lift)

Accommodation : 4 persons
Overall area : 768 square feet



UPPER STOREY



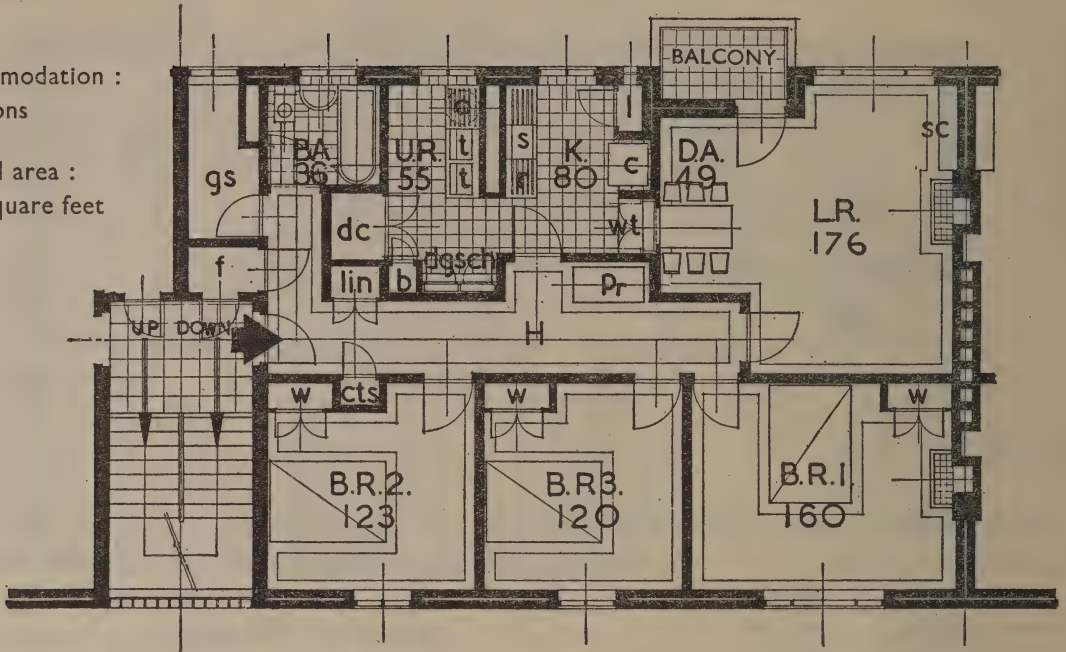
LONG-TERM PLANS

PLAN 9 L

4-APARTMENT FLAT

Accommodation :
6 persons

Overall area :
1115 square feet



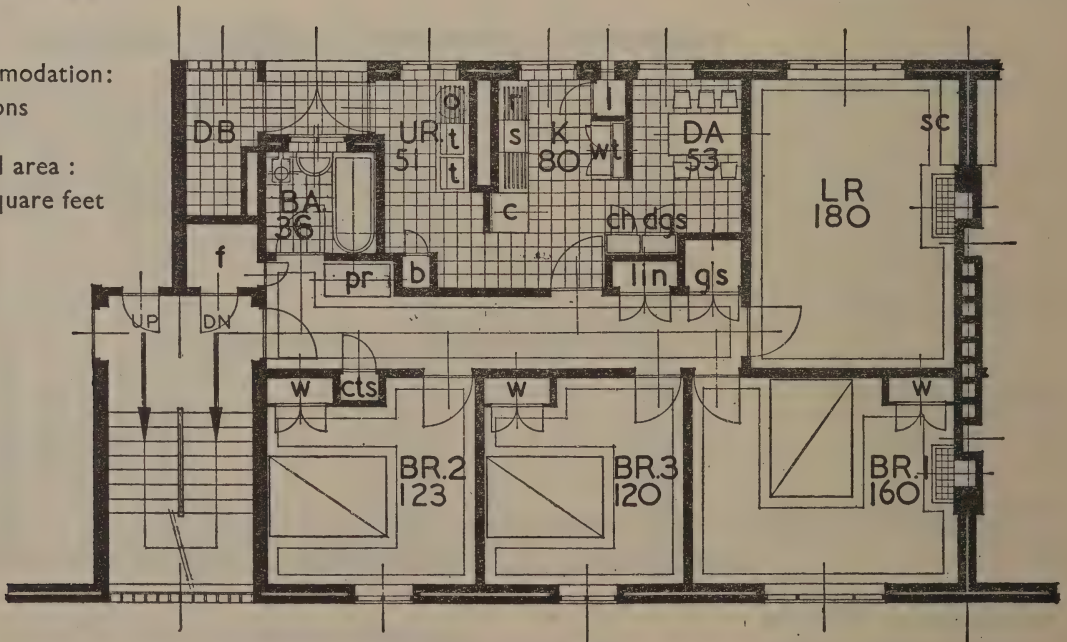
UPPER STOREY

PLAN 10 L

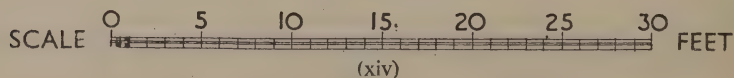
4-APARTMENT FLAT

Accommodation:
6 persons

Overall area :
1115 square feet



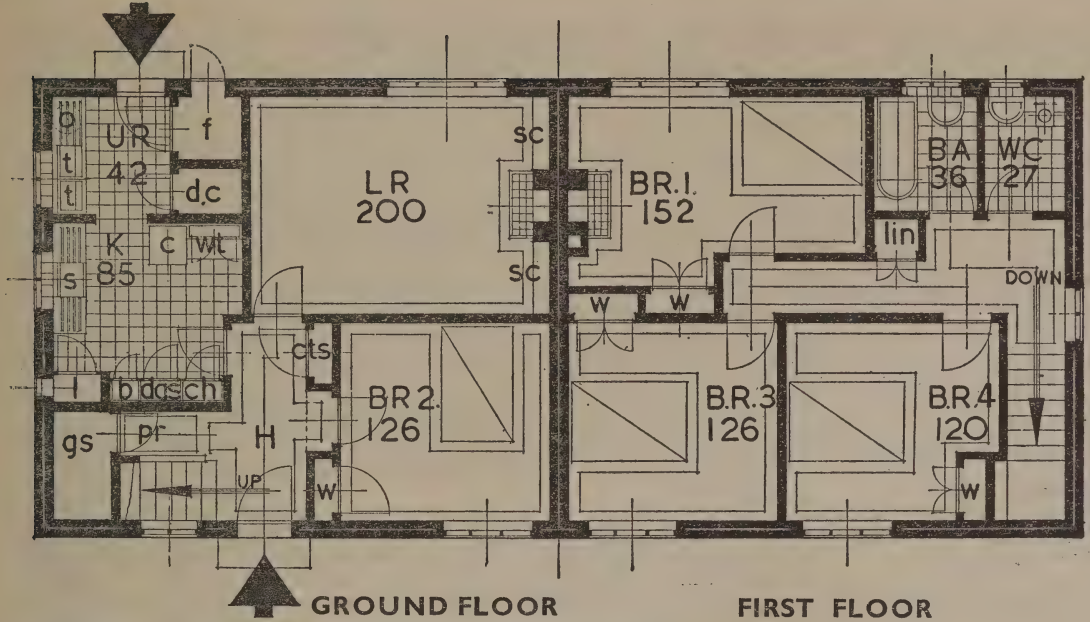
UPPER STOREY



LONG-TERM PLANS

PLAN 11 L

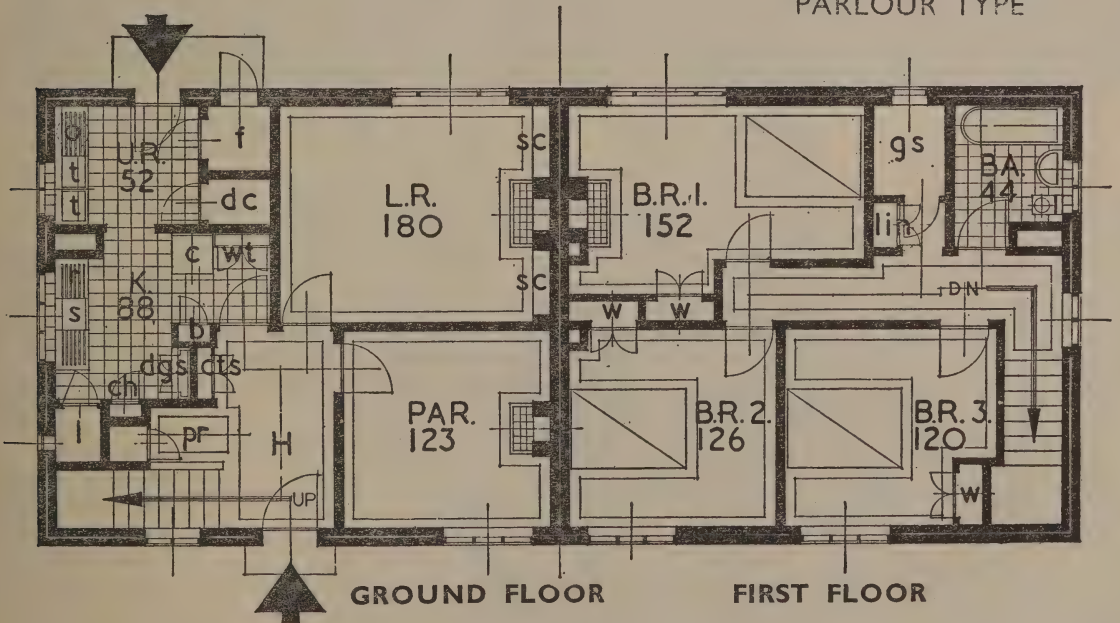
5-APARTMENT HOUSE



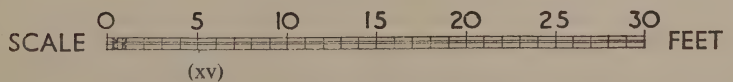
Accommodation : 8 persons Overall area : 1240 square feet

PLAN 12 L

5-APARTMENT HOUSE PARLOUR TYPE

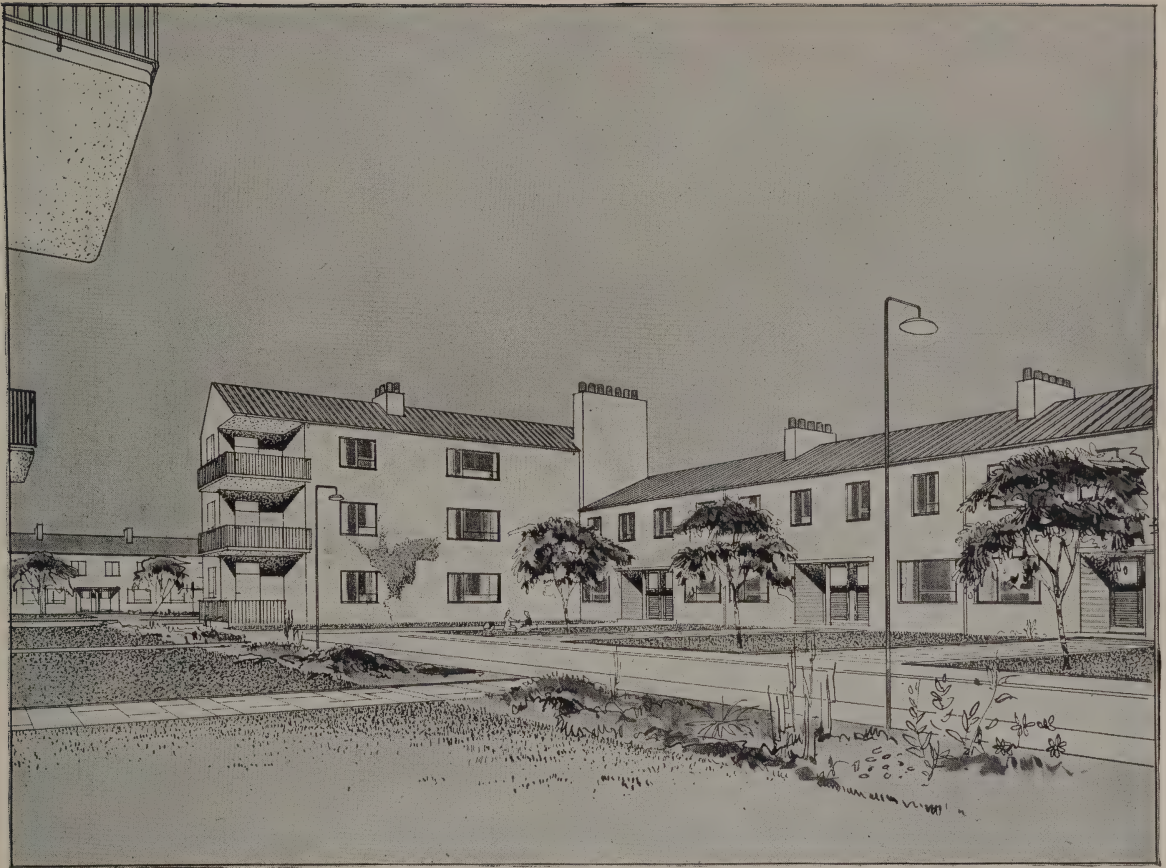


Accommodation : 6 persons
Overall area : 1240 square feet



RULES for the Measurement of Superficial Area laid down in
Scottish Board of Health Circular H. & T.P. No. V/1924:

- (a) The area will be measured within the external or containing walls of the house (so as to include the area of partitions, chimney breasts, bay windows and similar space), and, in the case of two-storey cottages, will be the combined areas, as so measured, of the two storeys.
- (b) In the case of houses built in flats the space occupied by a staircase will not be included in measuring the area of a flat, and in the case of two-storey houses the said space will be included once only in the area.
- (c) Habitable accommodation provided in an attic or storey formed in the roof will be included without regard to the use to which it may be intended to be put. In determining whether accommodation is habitable regard should be had not only to its condition as shown in the plans, but also to the possibility of its conversion into habitable accommodation. The area of so much of the attic or storey formed in the roof as is less than 5 feet in height will be excluded in measuring the habitable accommodation.
- (d) Outbuildings and cellarage will be excluded if they are not an essential part of the house, but will be included if they provide accommodation which is necessary to the occupation of the house or is usually included within the containing walls of the house. Outbuildings are buildings not communicating with the house which are outside the containing walls of the house, whether attached thereto or not. Examples of an outbuilding to be included are a w.c. or earth closet, coal-house or scullery. A tool shed, wood shed, or bicycle shed would not be included. The area of an outbuilding to be included will be measured within the containing walls of that area.
- (e) With regard to covered areas, such as the area of a verandah or porch, the general principle is that where such small areas are covered by light structures which though attached to are outside the containing walls of the house, and consequently do not add to the bulk of the main building, the measurement of these areas should not be included. But the area of porches or other open air spaces included within the lines of the main containing walls of the house which do increase the bulk of the buildings should be included in the measurement of the house.



THESE sketches give an impression of some of the possibilities in design, grouping and layout envisaged in the Report.

1. Terraced cottages of simple design grouped with three-storey modern flats give variety of architectural composition.

2. Single-storey rural cottages of traditional design.





3



4

3. Modern flats of two and three storeys, provided with verandah balconies and laid out in parallel blocks with communal gardens between the blocks.

4. Modern flats of three storeys illustrating variation of design introduced by the flat roof and alternative type of fenestration.

APPENDIX 2

SOURCES OF EVIDENCE

WRITTEN EVIDENCE

LOCAL AUTHORITIES

The Convention of Royal Burghs

The following Town Councils in addition submitted evidence to the Committee direct:

Airdrie	Buckhaven	Kilmarnock	Port Glasgow
Arbroath	Clydebank	Kilsyth	St. Andrews
Ardrossan	Coatbridge	Kintore	Saltcoats
Ayr	Elgin	Motherwell and Wishaw	
Barrhead	Greenock	New Galloway	

The Association of County Councils In Scotland

The following County Councils in addition submitted evidence to the Committee direct:

Aberdeen	East Lothian	Peebles	West Lothian
Clackmannan	Lanark	Roxburgh	Wigtown
Dunbarton	Midlothian	Stirling	Zetland

The Association of Counties of Cities

Evidence was received independently from each of the following cities:

Corporation of Aberdeen	Corporation of Edinburgh
Corporation of Dundee	Corporation of Glasgow

PROFESSIONAL, TECHNICAL, ETC., ORGANISATIONS, INDUSTRIAL ASSOCIATIONS, ETC.

The Royal Incorporation of Architects in Scotland
Chartered Surveyors' Institution (Scottish Branch)
Town Planning Institute (Scottish Branch)
Town and Country Planning Association (Scottish Branch)
The Institute of Municipal and County Engineers (Scottish Branch)
The Institute of Housing (Incorporated in the evidence of the Scottish Local Government Factors Association)
The National Council of Social Service
The Scottish National Health Visitors' Association
The Scottish National Building Trades Federation (Employers)
The National Federation of Building Trades Operatives (Scottish Section) (Incorporated in the evidence of the Scottish National Joint Council for the Building Industry)
The Saltire Society
The National Gas Organisations in Scotland
The Scottish Special Housing Association Limited
The Royal Sanitary Association
The Sanitary Inspectors' Association
The British Medical Association (Scottish Branch)
The Royal College of Physicians (Edinburgh)
The Society of Medical Officers of Health (Scottish Branch)
The Scottish National Housing and Town Planning Council
The Scottish Local Government Factors' Association
The Institution of Civil Engineers (Edinburgh and Glasgow Branches)
The Association for the Preservation of Rural Scotland
The Scottish National Joint Council for the Building Industry

Glasgow Progressive Party
 The Scottish National Union of Allotment Holders
 Edinburgh Old People's Welfare Council
 Glasgow Tree Lovers' Society
 The Society of Friends, Edinburgh
 The Council of Social Service (Niddrie and Craigmillar Branch), Edinburgh
 Hilton Discussion Group, Aberdeen
 Craigmillar and District Victory Council
 Glasgow Council of Tenants' Associations
 National Smoke Abatement Society
 Communist Party of Great Britain
 Representative Council of West of Scotland House Owners' Associations
 Scottish Council for Community Service during Unemployment
 The Timber Development Association Limited
 The Illuminating Engineering Society (Scottish Centre)
 The Linoleum Manufacturers' Association
 The Scottish Pre-cast Concrete Manufacturers' Association
 The Scottish Area Committee of the British Electrical Development Association
 The Scottish Joinery and Door Manufacturers' Association
 The Scottish Freestone Quarry Masters' Association
 West of Scotland Research Group on Rural Planning

WOMEN'S ORGANISATIONS, INCLUDING PROFESSIONAL, TECHNICAL, ETC., BODIES

The Scottish Women's Rural Institutes
 The Scottish Labour Women's Advisory Council
 The Scottish Unionist Association—Women's Section (Eastern and Western Divisional Councils)
 Scottish Liberal Women's Council
 The Scottish Council of Women Citizens' Associations (evidence submitted separately by constituent branches in
 Glasgow, Forfar, Dundee, Troon, St. Andrews and Arbroath)
 The Society of Women Housing Managers
 The Women's Housing Advisory Council
 The Electrical Association for Women
 The Women Representatives of the Gas Industry
 Townswomen's Guild
 Union of Catholic Mothers
 The Scottish Association of Girls' Clubs

ORAL EVIDENCE

The Committee heard oral evidence from the following:

The Convention of Royal Burghs
 The Association of County Councils
 Aberdeen Corporation
 Dundee Corporation
 Edinburgh Corporation
 Glasgow Corporation

Oral evidence was also taken by a panel of the Committee appointed to advise on technical matters from:

The Royal Incorporation of Architects in Scotland
 The Sanitary Inspectors' Association
 Town Planning Institute (Scottish Branch)
 The Institute of Municipal and County Engineers (Scottish Branch)

APPENDIX 3

QUESTIONNAIRE TO H.M. FORCES AND INDUSTRY

The following questionnaire was circulated to men and women serving in H.M. Forces and in various industrial organisations. An analysis is given of the replies received.

Note.—Taking account of questionnaires completed by discussion groups, it is estimated that 15,634 individuals in the Services and in industry contributed to the replies which have been received and on which the following percentages are based.

SECTION A—TYPES OF DWELLING

Question 1. Assuming your choice made no difference to your convenience as regards distance from work, shops, churches, schools, etc., or in the equipment and services provided, in what type of house would you prefer to live?

	In a town.		In the country.	
	H.M. Forces.	Workers in Industry.	H.M. Forces.	Workers in Industry.
	per cent.	per cent.	per cent.	per cent.
(a) Bungalow—detached	21	29	41	42
" semi-detached	11	7	8	8
" terrace	3	2	3	2
(b) Two-storey house—detached	30	13	19	11
" " semi-detached	12	7	7	3
" " terrace	2	2	1	1
(c) Flatted house, i.e. flats in two-storey blocks, mostly in blocks of four houses—"2 up and 2 down," each house having separate entrance from ground level	4	6	1	4
(d) Block of modern flats	14	15	1	2
Not answered	3	19	19	27
TOTAL	100	100	100	100

Question 2. (a) If you prefer blocks of modern flats (d), what should be the maximum number of storeys per block without lifts?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Two-storey	17	33
Three-storey	62	47
Four or more storeys	18	10
Not answered	3	10
TOTAL	100	100

Question 2. (b) If lifts are provided, what should be the maximum number of storeys per block?

	H.M. Forces.				Workers in Industry.			
	per cent.				per cent.			
Four storeys					7			20
Five storeys					6			7
Six storeys					33			46
Seven and eight storeys					9			17
Ten storeys					21			0
Twelve or more					20			0
Not answered					4			10
TOTAL					100			100

Question 3. Do you think that different types of houses are required to meet the needs of:

	H.M. Forces.				Workers in Industry.			
	(a) Single People.	(b) Families without children.	(c) Families with children.	(d) Old Couples.	(a) Single People.	(b) Families without children.	(c) Families with children.	(d) Old Couples.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Bungalow	5	23	19	65	1	18	33	37
Two-storey house	2	22	60	6	2	6	18	6
Flatted house	4	6	0	2	4	7	6	7
Block of flats	67	23	1	6	56	29	4	12
Not answered	22	26	20	21	37	40	39	38
TOTAL	100	100	100	100	100	100	100	100

SECTION B—STANDARDS OF LIVING SPACE

Question 1. What do you think are the desirable numbers of habitable rooms for families of different sizes? (Persons to be taken to include children of all ages.)

LIVING-ROOMS

No. in family	H.M. Forces.						Workers in Industry.					
	2	3	4	5	6	7	2	3	4	5	6	7
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
No. of rooms												
1 room	9	5	3	1	1	1	28	19	5	2	2	1
2 rooms	84	85	84	77	63	58	69	76	86	87	83	81
3 or more	1	3	6	14	26	30	—	—	2	2	9	10
Not answered	6	7	7	8	10	11	3	5	7	9	6	8
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

BEDROOMS

No. in family	H.M. Forces.						Workers in Industry.					
	2	3	4	5	6	7	2	3	4	5	6	7
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
<i>No. of rooms</i>												
1 room	17	3	—	—	—	—	37	4	—	—	—	—
2 rooms	73	43	12	3	—	—	59	67	28	6	1	—
3 rooms	3	47	58	42	18	5	1	23	56	57	31	9
4 rooms	—	1	22	37	46	44	—	1	8	26	47	56
5 rooms	—	—	—	8	18	30	—	—	1	2	12	21
6 or more	—	—	—	—	7	11	—	—	—	1	2	6
Not answered	7	6	8	10	11	10	3	5	7	8	7	8
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

TOTAL NUMBER OF ROOMS

No. in family	H.M. Forces.						Workers in Industry.					
	2	3	4	5	6	7	2	3	4	5	6	7
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
<i>No. of rooms</i>												
3 rooms	27	6	1	—	—	—	56	21	2	1	—	—
4 rooms	63	42	14	3	—	—	40	52	31	8	1	1
5 rooms	4	42	55	39	16	5	1	21	51	53	30	8
6 rooms	—	3	17	32	36	30	—	1	8	26	43	54
7 rooms	—	—	5	15	22	31	—	—	—	3	14	21
8 rooms	—	—	—	3	11	14	—	—	1	1	3	5
9 rooms	—	—	—	—	3	6	—	—	—	1	1	2
10 or more	—	—	—	—	2	4	—	—	—	—	1	2
Not answered	6	7	8	8	10	10	3	5	7	7	7	7
TOTAL	100	100	100	100	100	100	100	100	100	100	100	100

Question 2. Do you think that present room areas in council houses are adequate ?

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	22	65	13	100
Workers in Industry	38	48	14	100

Question 3. (a) Do you think that the areas of rooms other than bedrooms should be the same for different sizes of houses (and families) ?

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	25	62	13	100
Workers in Industry	40	52	8	100

Question 3. (b) If not, which rooms should differ in size according to the size of the house (and of the family to be accommodated) ?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Living-room	58	75
Bedroom and Living-room	11	8
Bedroom	—	—
Living-room and Scullery	21	8
All rooms	5	6
Not answered	5	3
TOTAL	100	100

Question 4. If a larger living-room (and a parlour) were provided, would you be content with smaller bedrooms ?

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	36	56	8	100
Workers in Industry	39	56	5	100

SECTION C—INTERNAL PLANNING AND ARRANGEMENT

Question 1. Is access to all habitable rooms from a lobby desirable ?

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	88	5	7	100
Workers in Industry	95	3	2	100

Question 2. How should the scullery (kitchenette) be related to the living-room ?

- (a) directly—by door opening from one room into the other and/or by serving-hatch between living-room and scullery (kitchenette).
 (b) indirectly—by doors into each room from lobby only, with no door or hatch between scullery (kitchenette) and living-room.

	(a) Directly.	(b) Indirectly.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	71	24	9	100
Workers in Industry	78	21	1	100

Question 3. Should the w.c. be in the same apartment as the bath and basin, or in a separate apartment ?

	Same.	Separate.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	3	85	12	100
Workers in Industry	14	75	11	100

Question 4. If w.c. is in a separate apartment, on which floor should it be in a two-storey house ?

						H.M. Forces.	Workers in Industry.
						per cent.	per cent.
First storey						42	48
Second storey						43	41
Both						8	5
Not answered						7	6
TOTAL						100	100

Question 5. Would you like to take meals in: (a) Living-room; (b) Scullery (Kitchenette) (if large enough) ?

		(a) Living-room.	(b) Scullery.	Not answered.	Total.
		per cent.	per cent.	per cent.	per cent.
H.M. Forces		63	31	6	100
Workers in Industry		62	32	6	100

Question 6. If you would like to take your meals in the living-room, would you like, in addition, a dining recess ?

		Yes.	No.	Not answered.	Total.
		per cent.	per cent.	per cent.	per cent.
H.M. Forces		48	45	7	100
Workers in Industry		55	40	5	100

Question 7. If you would like to take your meals in the scullery (kitchenette), would you like, in addition, a dining recess ?

		Yes.	No.	Not answered.	Total.
		per cent.	per cent.	per cent.	per cent.
H.M. Forces		63	25	12	100
Workers in Industry		60	21	19	100

Question 8. Would you like to cook in—(a) the living-room, (b) the scullery (kitchenette) ?

		(a)	(b)	Not answered.	Total.
		per cent.	per cent.	per cent.	per cent.
H.M. Forces		1	97	2	100
Workers in Industry		1	98	1	100

Question 9. (a) Would you like your coal store entered from inside or outside the house? (b) What amount of coal would you like to be able to store at any one time? (c) How much coal do you think you would use per week?

H.M. Forces Workers in Industry	(a)					(b)						(c)					
	Inside.	Outside.	Outside with inside hatch.	Not answered.	Total.	$\frac{1}{2}$ ton.	1 ton.	1 $\frac{1}{2}$ ton.	2 or more.	Not answered.	Total.	Under 2 cwt.	2 cwt.	3 cwt.	4 or more.	Not answered.	Total.
	per cent. 25	per cent. 52	per cent. 16	per cent. 7	per cent. 100	per cent. 14	per cent. 52	per cent. 6	per cent. 13	per cent. 15	per cent. 100	per cent. 8	per cent. 26	per cent. 28	per cent. 15	per cent. 23	per cent. 100
	21	65	12	2	100	21	61	5	9	4	100	16	41	25	4	14	100

SECTION D—EQUIPMENT

Question 1. (a) Would you like central heating? (b) If so, would you like it from: (i) a boiler in your own house; (ii) a central source?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
From boiler in own house	27	32
From a central source	31	24
No central heating	37	40
Not answered	5	4
TOTAL	100	100

Question 2. (a) Would you like a constant hot-water supply on tap from a central source?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Yes	50	51
No	49	48
Not answered	1	1
TOTAL	100	100

Question 2. (b) If not, how would you like water heated?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Living-room fire	55	54
Separate stove (e.g. in scullery-kitchenette)	37	23
Gas heater	7	23
Not answered	1	—
TOTAL	100	100

Question 3. (a) In the absence of central heating should all bedrooms have separate heating facilities ?

	H.M. Forces.	Workers in Industry.
Yes	per cent. 100	per cent. 99
No	—	—
Not answered	—	1
TOTAL	100	100

Question 3. (b) If so, what ?

	H.M. Forces.	Workers in Industry.
Gas fire	per cent. 3	per cent. 4
Electric fire	51	53
Coal fire	34	29
Gas or electricity	3	1
Electricity and coal	9	13
TOTAL	100	100

Question 4. How would you like to cook, assuming the three methods were available and costs comparable ?

	H.M. Forces.	Workers in Industry.
Gas	per cent. 31	per cent. 36
Electricity	59	57
Coal	3	2
Gas or electricity	5	2
Gas and coal	2	3
TOTAL	100	100

Question 5. How would you prefer to have clothes washed ?

	H.M. Forces.	Workers in Industry.
In the home	per cent. 45	per cent. 70
Wash-house serving a group of houses	15	8
Public wash-house	1	1
Commercial laundry	19	9
Home and laundry	17	11
Not answered	3	1
TOTAL	100	100

Question 6. If you wash clothes at home, do you want to do it in (a) the scullery (kitchenette); (b) a special apartment suitably equipped ?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
(a) Scullery (kitchenette)	25	24
(b) Special apartment suitably equipped	74	74
Not answered	1	2
TOTAL	100	100

Question 7. Where do you prefer to dry clothes ?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Scullery (kitchenette)	—	2
Heated Drying Cupboard	36	10
Drying Green	32	53
Drying Balcony (in flats)	—	2
Special Communal Drying Room (in flats)	—	—
Drying Green and Heated Cupboard	22	28
Drying Green and Balcony	5	3
Scullery and Drying Green	5	2
Drying Green and Communal Drying Room	—	—
TOTAL	100	100

Question 8. (a) Would you like the following items of equipment, assuming they were provided as " standard " in new houses after the war ?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Refrigerator:		
Yes	94	90
No	6	10
TOTAL	100	100
Immersion Heater:		
Yes	81	82
No	19	18
TOTAL	100	100
Drying Rack for Plates:		
Yes	89	87
No	11	13
TOTAL	100	100
Washing Machine:		
Yes	85	81
No	15	19
TOTAL	100	100
Fitted Ironing Board:		
Yes	88	94
No	12	6
TOTAL	100	100

Question 8. (b) Have you any other suggestions for "standard" equipment and labour-saving devices generally

	All who made suggestions.	No suggestions.	Total
	per cent.	per cent.	per cent.
H.M. Forces	66	34	100
Workers in Industry	29	71	100

The principal suggestions made by both groups were:

Bookshelves	Showers
Electric iron	Telephone
Electric plugs	Vacuum cleaner

Question 9. (a) Would you like built-in furniture

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	60	34	6	100
Workers in Industry	56	38	6	100

Question 9. (b) If so, what items?

	H.M. Forces.	Workers in Industry.		H.M. Forces.	Workers in Industry.
	per cent.	per cent.		per cent.	per cent.
Wardrobes	37	73	Pull-out table in scullery	12	6
Cupboards	82	59	Window seats	7	7
Dresser	16	34	Folding beds	6	6
Drawers	4	3	Dressing-table	—	4

[All who prefer built-in furniture have suggested more than one item which accounts for the percentages totalling more than 100. Cupboards and wardrobe cupboards are conclusively most popular.]

SECTION E—STANDARD OF CONSTRUCTION

Question I. Do you prefer sash-and-case windows (sliding vertically), or casement windows (hinged)?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Sash-and-Case	13	20
Casement	82	73
Not answered	5	7
TOTAL	100	100

Question 2. What floor finishes do you prefer (e.g. wood, concrete, tiles, etc.) ?

	H.M. Forces.				Workers in Industry.			
	Living-room.	Scullery.	Bedroom.	Bathroom.	Living-room.	Scullery.	Bedroom.	Bathroom.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Wood	98	10	99	17	98	35	98	35
Tiles	—	70	—	64	—	42	—	56
Concrete	1	15	—	3	—	19	—	4
Linoleum	—	1	—	2	—	—	—	—
Cork	—	—	—	1	—	—	—	1
Rubber	—	3	—	11	—	2	—	2
Not answered	1	1	1	2	2	2	2	2
TOTAL	100	100	100	100	100	100	100	100

Question 3. What wall finishes do you prefer (e.g. washable distemper, oil paint, tiles, etc.) ?

	H.M. Forces.				Workers in Industry.			
	Living-room.	Scullery.	Bedroom.	Bathroom.	Living-room.	Scullery.	Bedroom.	Bathroom.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
Washable Distemper	45	21	43	6	41	12	54	2
Oil Paint	18	14	16	9	28	35	20	19
Tiles	—	62	—	82	—	51	—	77
Wood	3	—	—	—	2	—	—	—
Wall-paper	31	—	37	1	26	—	23	—
Not answered	3	3	4	2	3	2	3	2
TOTAL	100	100	100	100	100	100	100	100

SECTION F—DESIGN

Question 1. Do you think the appearance of housing schemes can be improved ?

	H.M. Forces.		Workers in Industry.	
	per cent.		per cent.	
	Yes	No	Yes	No
Yes	90	3	71	3
No	7	—	26	—
Not answered	—	—	—	—
TOTAL	100	100	100	100

If so, in what respects ?

(a) Layout :

(b) Length of and/or height of buildings :

	H.M. Forces.	Workers in Industry.		H.M. Forces.	Workers in Industry.
	per cent.	per cent.		per cent.	per cent.
	Yes	No		Yes	No
Yes	80	60	Yes	43	31
No	20	40	No	57	69
TOTAL	100	100	TOTAL	100	100

(c) Provision of open spaces:

(d) Design of individual houses:

	H.M. Forces.	Workers in Industry.		H.M. Forces.	Workers in Industry.
	per cent.	per cent.		per cent.	per cent.
Yes	76	70	Yes	74	66
No	24	30	No	26	34
TOTAL .	100	100	TOTAL .	100	100

(e) Choice of materials:

(f) Use of colour:

	H.M. Forces.	Workers in Industry.		H.M. Forces.	Workers in Industry.
	per cent.	per cent.		per cent.	per cent.
Yes	74	70	Yes	69	64
No	26	30	No	31	36
TOTAL .	100	100	TOTAL .	100	100

Question 2. Are you in favour of

	H.M. Forces.		Workers in Industry.	
	In Town.	In the country.	In Town.	In the country.
	per cent.	per cent.	per cent.	per cent.
Traditional Design	12	50	4	33
Modern Design	81	43	83	46
Not answered	7	7	13	21
TOTAL .	100	100	100	100

SECTION G—LAYOUT AND AMENITIES

Question 1. Do you want

(a) Private Garden?

(b) Communal Garden for the private use of tenants of a number of houses and kept up jointly by the tenants?

	H.M. Forces.	Workers in Industry.		H.M. Forces.	Workers in Industry.
	per cent.	per cent.		per cent.	per cent.
Yes	97	95	Yes	5	6
No	3	5	No	95	94
Not answered	—	—	Not answered	—	—
TOTAL .	100	100	TOTAL .	100	100

(c) Public Garden associated with a particular block of flats or group of houses kept up by the local authority?

(d) Allotment?

	H.M. Forces.	Workers in Industry.		H.M. Forces.	Workers in Industry.
	per cent.	per cent.		per cent.	per cent.
Yes	19	15	Yes	29	24
No	81	85	No	71	76
Not answered	—	—	Not answered	—	—
TOTAL .	100	100	TOTAL .	100	100

(e) Children's Playgrounds?

	H.M. Forces.	Workers in Industry.
	per cent.	per cent.
Yes	81	71
No	19	29
Not answered	—	—
TOTAL .	100	100

Question 2. Which of the following would you like to see provided in housing schemes or blocks of flats?

	H.M. Forces.			Workers in Industry.		
	House.	Flat.	Unspecified house or flat.	House.	Flat.	Unspecified house or flat.
	per cent.	per cent.	per cent.	per cent.	per cent.	per cent.
(a) Communal Restaurant	10	18	8	17	16	9
(b) Communal Kitchen *	9	15	3	12	16	7
(c) Day Nursery	41	34	33	38	19	22
(d) Community Centre	28	18	24	27	12	17
(e) Health Clinic	49	35	37	46	24	28
(f) Public Library	49	35	38	43	30	29
None	2	—	—	2	—	—
Not answered	3	—	—	12	—	—

* From which cooked food can be obtained and eaten at home.

[Suggestions were made for the provision of one or more of these facilities in housing schemes or flats, in both, or unspecified; consequently the percentages in the columns add up to more than 100.]

GENERAL

Question 1. (a) Would you prefer to rent your house?

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	60	40	—	100
Workers in Industry	49	48	3	100

Question 1. (b) If so, how much of the family income would you be prepared to pay in rent (including rates) for your "ideal house"?

Family income per week . . .	H.M. Forces.				
	Up to £4.	Up to £5.	Up to £6.	Up to £7 10s.	Up to £10.
	per cent.	per cent.	per cent.	per cent.	per cent.
Up to 5 per cent.	2	2	2	2	2
Over 5 to 10 per cent.	2	5	5	5	8
Over 10 to 15 per cent.	26	31	25	25	31
Over 15 to 20 per cent.	62	50	56	56	47
Not answered	8	12	12	12	12
TOTAL	100	100	100	100	100

Family income per week . . .	Workers in Industry.				
	Up to £4.	Up to £5.	Up to £6.	Up to £7 10s.	Up to £10.
	per cent.	per cent.	per cent.	per cent.	per cent.
Up to 5 per cent.	3	3	2	5	5
Over 5 to 10 per cent.	21	23	23	17	23
Over 10 to 15 per cent.	47	31	36	41	35
Over 15 to 20 per cent.	24	17	15	11	11
Not answered	5	26	24	26	26
TOTAL	100	100	100	100	100

In the questionnaire as circulated, the question asked was the precise amount of weekly rental regarded as appropriate to the incomes stated. For convenience the replies have been analysed on a "percentage-of-income" basis.

Question 2. (a) Would you prefer to buy a house?

	Yes.	No.	Not answered.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	40	60	—	100
Workers in Industry	48	49	3	100

Question 2. (b) If so, how?

	(i) Lump Sum.	(ii) Instalment (e.g. through a Building Society or Housing Association).	(iii) Any other method of house purchase.	Total.
	per cent.	per cent.	per cent.	per cent.
H.M. Forces	39	47	14	100
Workers in Industry	43	50	7	100

QUESTIONNAIRE ON FURNITURE

The following questionnaire was circulated to all local housing authorities in Scotland and to certain organisations.

QUESTIONNAIRE

SCOTTISH HOUSING ADVISORY COMMITTEE

SUB-COMMITTEE ON FURNITURE

Questionnaire to Bodies invited to give Evidence

Name of Local Authority..... County Council
Town Council

or

Organisation
completing this questionnaire.

Question 1. With what items of furniture, fittings, etc., should the modern home be equipped, classified, if possible, by reference to the following rooms of the house:

- (i) Kitchenette (Scullery).
- (ii) Living-room.
- (iii) Parlour, if any
- (iv) Bedrooms.
- (v) Bathroom.
- (vi) Lobby.
- (vii) In the house generally.

Question 2. What other items or conveniences are recommended to meet special needs in fishing, rural, mining, etc., areas, e.g. additional cupboard accommodation for working clothes and muddy boots; space for storage and repair of nets, etc.?

Question 3. Which of the items suggested are regarded as so essential that they should be provided either as standard fittings or as standard movables "going with" the house?

Question 4. In the case of these "standard" articles, should the cost of provision be indirectly reflected in the rent paid?

Question 5. Should local authorities have express powers to sell, either for full cash payments or on hire purchase or to hire only, movable furniture, appliances, etc., to their own tenants?

Question 6. Which items not provided as "standard" articles should be supplied to tenants by the local authority:

- (a) on sale, including sale by instalments?
- (b) on hire?

Question 7. Should supply of furniture, furnishings, etc., not provided as "standard," be subject to any restriction?

Question 8.

- (i) Where local authorities exercise their powers:
 - (a) at what prices, i.e. wholesale, retail, etc., should the articles be provided?
 - (b) what percentage should be charged to cover administration costs, bad debts, etc.?
- (ii) If articles are supplied on Hire Purchase what interest rate is regarded as appropriate?

Question 9. If movable furniture, furnishings, etc., are to be provided by local authorities, should choice from range of types of articles be encouraged?

Question 10. Should payments for hire or hire purchase be collected with rent?

Question 11. If more than one Department of local authority is providing furniture, fittings, etc., should activities of all Departments be co-ordinated, to ensure either compounding of separate instalment payments or uniformity of methods of payment, etc.?

General Observations.

Note.—In the original questionnaire space was, of course, left for the reply to each question.

Replies were received from the following bodies:

County Councils

Aberdeen	Caithness	Kincardine	Renfrew
Angus	Clackmannan	Kinross	Ross and Cromarty
Argyll	Dunbarton	Kirkcudbright	Roxburgh
Ayr	East Lothian	Lanark	Stirling
Banff	Fife	Midlothian	Sutherland
Berwick	Inverness	Peebles	Wigtown
Bute			

Town Councils

Aberfeldy	Cumnock and Holmhead	Irvine	Newport
Abernethy	Cupar	Johnstone	North Berwick
Airdrie	Dalkeith	Kelso	Paisley
Alloa	Darvel	Kilmarnock	Peebles
Annan	Dingwall	Kilsyth	Penicuik
Ardrossan	Dornoch	Kilwinning	Perth
Auchterarder	Doune	Kinghorn	Peterhead
Auchtermuchty	Dufftown	Kinross	Pittenweem
Ayr	Dumbarton	Kintore	Port Glasgow
Ballater	Dumfries	Kirkcaldy	Prestonpans
Barrhead	Dunblane	Kirkcudbright	Prestwick
Bathgate	Dundee	Kirriemuir	Renfrew
Blairgowrie	Dunfermline	Ladybank	Roths
Bonnyrigg and Lasswade	Edinburgh	Lanark	Rothsay
Brechin	Elie and Earlsferry	Largs	Rutherglen
Bridge of Allan	Elgin	Leslie	St. Andrews
Buckhaven	Eyemouth	Lochgelly	St. Monance
Buckie	Falkirk	Lockerbie	Saltcoats
Burghead	Forres	Lossiemouth	Sanquhar
Burntisland	Fort William	Macduff	Stirling
Callander	Galston	Markinch	Stonehaven
Campbeltown	Gatehouse	Maybole	Stranraer
Castle Douglas	Girvan	Milngavie	Tayport
Clydebank	Glasgow	Monifieth	Tobermory
Coatbridge	Gourock	Montrose	Tranent
Coldstream	Grantown-on-Spey	Motherwell and Wishaw	Troon
Coupar-Angus	Hawick	Musselburgh	Whitburn
Cowdenbeath	Helensburgh	Nairn	Whithorn
Crieff	Huntly	Newburgh	Wick
Cromarty	Innerleithen	New Galloway	Wigtown
Cullen	Inverness	Newmilns and Greenholm	

Women's Organisations including Professional, Technical, etc., Bodies

Health Visitors' Association:

Edinburgh
Stirling County
Lanark County

Queen's Institute of District Nursing (Scottish Branch)

Scottish Co-operative Women's Guild:

Central Council
Glasgow
Alloa
Lanarkshire

Scottish Council for Community Service during Unemployment

Scottish Liberal Federation Women's Council (Eastern Branch)

Scottish National Health Visitors' Association

Scottish Unionist Association Women's Committee:

Eastern Divisional Council

Western Divisional Council

The Scottish Farm Servants' Union (Evidence by wives of workers)

The Scottish Women's Rural Institutes

The Labour Party, Scottish Council (Women's Section)

The Society of Women Housing Managers

Union of Catholic Mothers (Edinburgh)

Women's Advisory Housing Council

Women Citizens' Association:

Arbroath

Dundee

Edinburgh

Forfar

Glasgow

Other Organisations

City of Edinburgh Council of Social Service

City of Glasgow Society of Social Service

Musselburgh Progressive Citizens' Association

Scottish Furniture Manufacturers' Association

Scottish National Housing and Town Planning Council

Scottish Special Housing Association Ltd.

The National Council of Social Service, Scottish Advisory Committee:

(1) Garrowhill Garden Estate Owners' Association

(2) Saughtonhall Social and Athletic Association, Edinburgh

(3) Greenock Community Centre

(4) District Council of Stirling Central No. 1

The Sanitary Inspectors' Association of Scotland

The Scottish Local Government Factors' Association

**The Royal Sanitary Institute
Library.**

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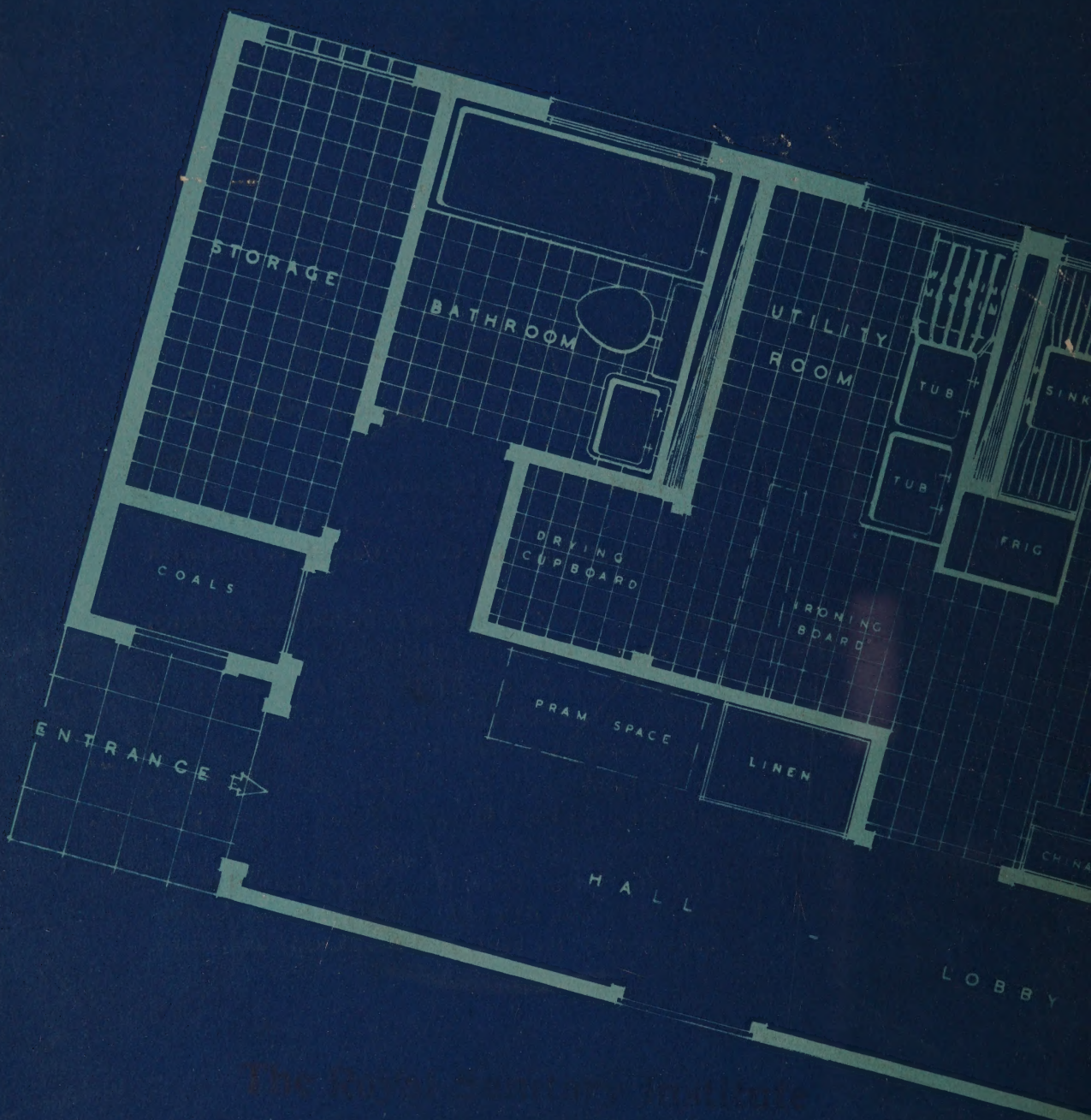
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